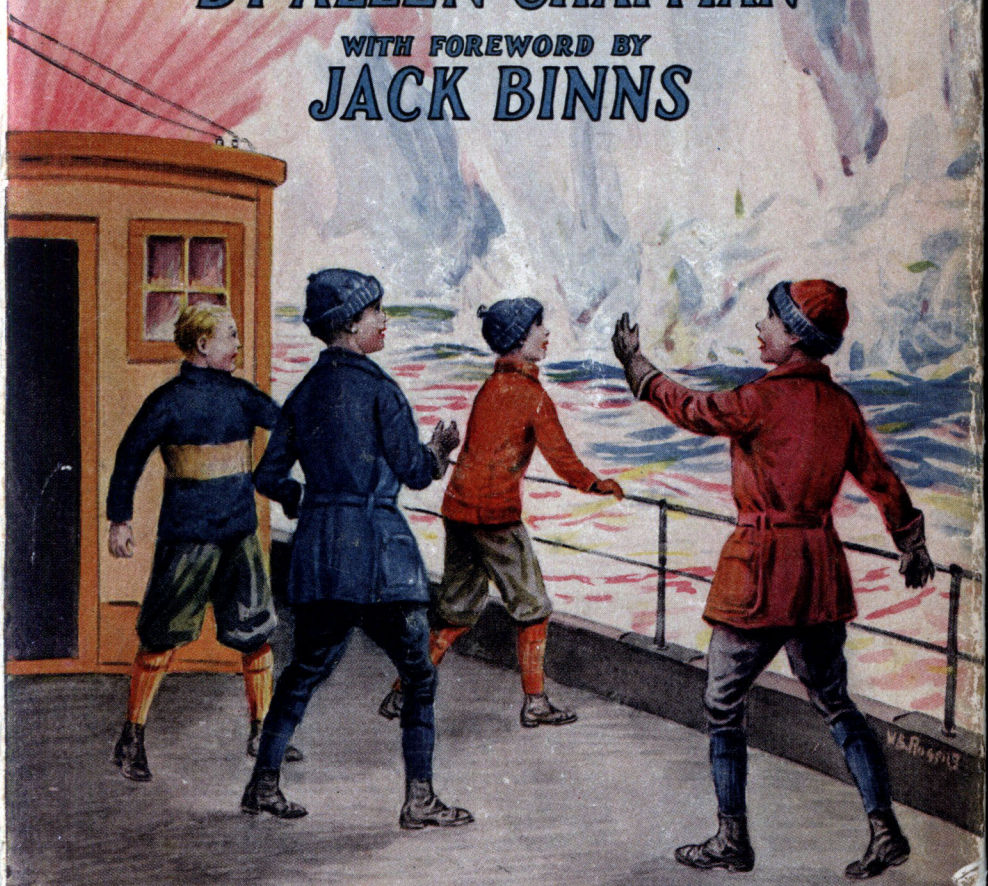
The RADIO BOYS with the ICEBERG PATROL

BY ALLEN CHAPMAN

WITH FOREWORD BY
JACK BINNS



THE RADIO BOYS SERIES

(TRADEMARK REGISTERED)

THE RADIO BOYS SERIES

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THE RADIO BOYS WITH THE ICEBERG PATROL

OR,

Making Safe the Ocean Lanes

By ALLEN CHAPMAN

Author of

"The Railroad Series," Etc.

With a

FOREWORD BY JACK BINNS

The Radio Boys auto to Maine and while there have a chance to take a sea trip to Halifax. In a dense fog their vessel collides with a lumber schooner and they are in danger of drowning when other ships come to their assistance. The boys are transferred to a naval vessel that is on iceberg patrol, as it is called—sending out warnings to all ships of the proximity of large icebergs. The lads have a strenuous time of it, and when the regular radio men are taken sick they jump in and prove that they can also send out messages through the ether. Once they run so close to a monster berg some polar bears leap to the deck of the ship, causing great excitement, and there is more excitement when a big berg is blown up with T. N. T. A true to life picture of radio service among the icebergs, as informing as it is interesting.

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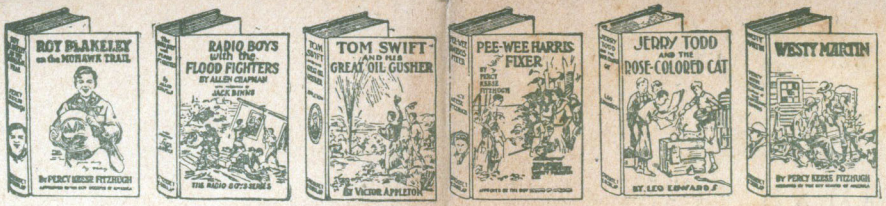
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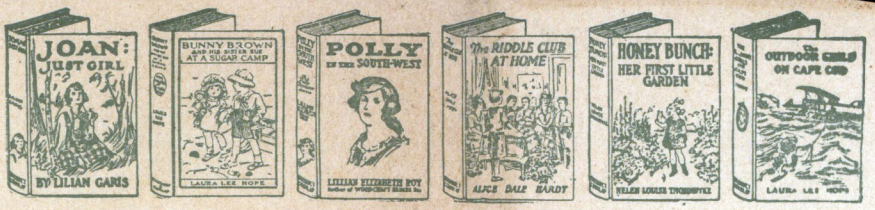
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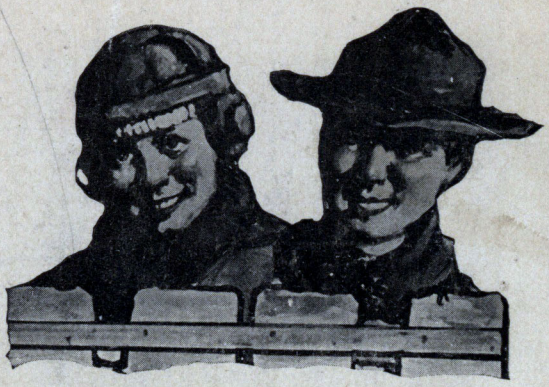

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The RADIO BOYS with the ICEBERG PATROL

By ALLEN CHAPMAN

WITH FOREWORD BY JACK BINNS

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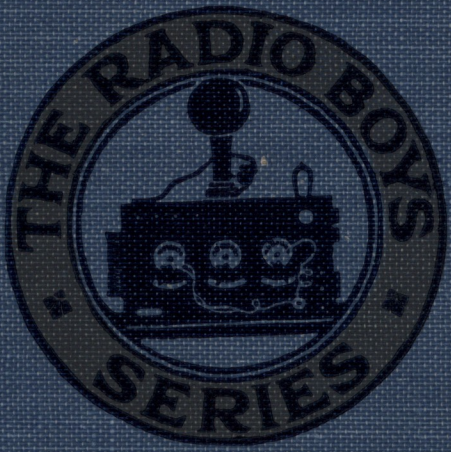

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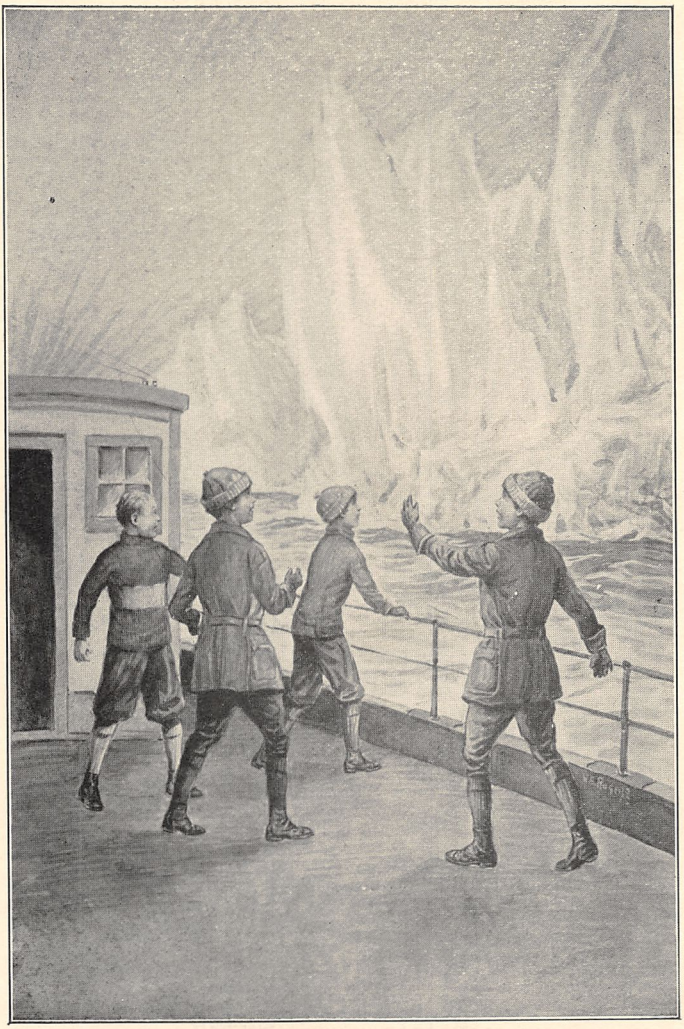

THEY LOOKED IN WONDER AT THE FLEET OF ICEBERGS.
The Radio Boys With the Iceberg Patrol. *Page* 172

THE RADIO BOYS SERIES

(Trademark Registered)

THE RADIO BOYS WITH THE ICEBERG PATROL

OR

MAKING SAFE THE OCEAN LANES

BY

ALLEN CHAPMAN

AUTHOR OF

THE RADIO BOYS' FIRST WIRELESS
THE RADIO BOYS WITH THE FOREST RANGERS
RALPH OF THE ROUNDHOUSE
RALPH, THE TRAIN DISPATCHER, ETC.

WITH FOREWORD BY

JACK BINNS

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The Radio Boys with the Iceberg Patrol

FOREWORD

By Jack Binns

All of the wondrous possibilities of radio are covered in this thrilling tale which deals with the latest adventures of The Radio Boys. It is a story well told, particularly in connection with the description of the collision at sea which precipitated the experience of the boys in the field of ice.

Of all the uses to which radio has been put, there is none more important than that in conjunction with the annual ice patrol in the steamship lanes of the Atlantic. Night and day the vessels from the various civilized nations engaged in this work vie with each other in devotion to duty in order that their efforts will save lives and property from danger on the high seas. Their sole medium of warning is the modern wonder of the world—radio.

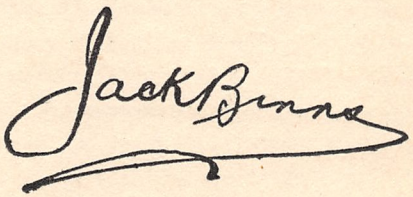
The escapades of the boys in this book are extremely thrilling, but not particularly more so than is actually possible in every day life upon the seven seas.

Its appearance is extremely appropriate, because it is coincident with the announcement that the Coast Guard cutters, *Tampa* and *Modoc*, are now under orders to proceed to the region east of Newfoundland's rugged shores where the

ice from Greenland is swept down upon the frigid Labrador current across the steamship lanes to annihilation in the warmer southern waters. For the next three months these two vessels will go through the experiences detailed in "The Radio Boys with the Iceberg Patrol."

The history of this patrol dates from the disaster which overtook the giant liner *Titanic* in April 1912, when that ill-fated ship struck the submerged ledge of an iceberg in mid-ocean on her maiden voyage. The gaping wound in her side was so large that she sank within thirty-five minutes after striking the iceberg, and more than 1,500 of her passengers and crew were drowned.

As a result of this appalling disaster a conference was called at which representatives of all maritime nations participated in London, and there the rules for this iceberg patrol were agreed upon. Every year from March until the end of July these vessels are engaged in their humane work, and since that fateful day in 1912, hundreds of steamships, large and small, have been saved from a similar fate by the timely warnings of Radio.



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THE RADIO BOYS WITH THE ICEBERG PATROL

CHAPTER I

THE CRY FOR HELP

"SAY, fellows, whom do you think I got a letter from?" cried Bob Layton, as he ran out of his front gate to meet a group of boys who were coming down the street.

"From the President of the United States, judging from the way you're all worked up about it," replied Joe Atwood, with a grin.

"My guess would be the King of England," chimed in Jimmy Plummer.

"Quit your kidding!" exclaimed Bob. "They don't know that I'm alive, and don't care whether I am or not. The letter came from Paul Bentley."

That Paul Bentley's name was one to conjure with was evident from the keen interest that leaped into every face.

"Paul Bentley!" cried Joe. "What does he have to say? How are things going with the old scout?"

"Is he coming to Clintonia?" asked Herb Fennington, eagerly.

"No such luck," Bob replied to the last question. "Say, maybe he wouldn't get a welcome if he did! No, he's still up in the Spruce Mountain district, fighting fires. Says they had a big one a couple of weeks ago, almost as bad as the one in which we fellows came so near to losing our lives."

"It must have been a lallapaloozer then," affirmed Jimmy. "I never believed anything could be nearly as bad as that. Gee, I feel hot flashes whenever I think of it. And I think of it pretty often, too. Sometimes I wake up in the night and begin sniffing around for smoke."

"Same here," chimed in Joe. "Whenever there was a fire in town I used to like to run to it. But not any more! I've had enough of fires to last me a lifetime."

"We did have a pretty tough fight for life," assented Bob. "What with the fire on one hand and the bears on the other, we had a mighty sight more of excitement than we bargained for."

"Yet that's what we went to Spruce Mountain to get," observed Joe Atwood.

"We got it all right," remarked Jimmy. "And yet, since we got out of it safely, I'm mighty glad we had the experience. And leaving the fire

out of the account, what a whale of a good time we had! Good air, good eats, good company. Everything was good."

"Everything?" queried Herb, with a tinge of skepticism.

"Sure!" declared Jimmy, stoutly. "Point out anything that wasn't."

"How about Buck Looker and Carl Lutz?" asked Herb, with a grin.

"They were good too," asserted Jimmy. "Good for nothing. But, after all, they didn't do us any real harm, though they tried hard enough. And I guess the scare they got in the fire took some of the meanness out of them."

"I don't know about that," remarked Joe dubiously. "Buck was frightened 'most to death, and he was ready to promise almost anything. But probably that didn't change his real nature. If he should get a chance to do us a bad turn, he'd probably do it, just as he always has. You've heard that old saying that the leopard can't change its spots, haven't you? Buck sure had a lot of spots."

"Talk about angels, and they appear!" exclaimed Herb. "Here they come now."

The four boys looked in the direction that Herb Fennington indicated, and saw two boys of about their own age coming down the street. The larger of the two was a heavily built, hulk-

ing fellow, with eyes set too close together and a look of the bully standing out all over him. The other was not so large in bulk, but quite as tall. His complexion was pasty and there was a furtive look about him that was anything but prepossessing.

"Fallen angels," muttered Joe, in reply to Herb's last remark. "I'll bet at this moment they're cooking up some low-down trick or other. They wouldn't be happy if they weren't. That's their conception of having a good time."

The two newcomers were coming along facing each other and tossing a baseball between them. The slenderer one, Carl Lutz, had his back toward the four friends, while the heavier one, Buck Looker, was facing them.

Just as they got about twenty feet from Bob Layton and his friends, Buck threw the ball well to one side of Lutz. Even at that, the latter could easily have stopped it, if he had wanted to. He made only a half-hearted offer at it, however, and the ball went swiftly past him and struck Jimmy Plummer full in the pit of the stomach.

The ball was hard thrown, and it doubled Jimmy up promptly. With a cry of pain, he fell to the sidewalk.

Bob sprang toward him to pick him up, while Joe glared wrathfully at Buck.

"That was a nice thing to do, wasn't it?" he demanded.

"Aw, how could I help it!" growled Looker, not exhibiting the slightest compunction nor offering to go to Jimmy's assistance. "He ought to have kept his eyes open and gotten out of the way."

"I believe you did it on purpose," broke in Herb.

"You can believe what you like," snarled Buck. "How could I help it if Carl didn't stop the ball?"

"It's mighty funny that the first wild throw should come just as we were passing by," observed Joe.

"And that it should be such a swift one," added Herb. "You were just tossing the ball until you got near us. Then you let out with all your might. And Lutz didn't even try to stop it."

"I did make a try for it," growled Lutz, though the look in his eyes did not bear out his statement.

They attempted to pass by, but Bob Layton barred the way.

"Just wait a minute," he said. "Are you badly hurt, Jimmy?" he added, addressing his companion, whom he had helped to his feet.

"It—it knocked the breath out of me, and it hurt like the mischief," gasped Jimmy, whose

face was white and who spoke with difficulty. "But I guess I'll be all right in a little while."

"Now, look here, Buck Looker," said Bob, with a steely look in his eyes, before which both Buck and Lutz drew back. "I had hoped that we had got through with this kind of thing from you and your gang. Do you remember what you promised when we saved your life in the forest fire? You told us on your knees that you'd cut out all the dirty tricks that you had been trying to put over on us for the last year or two. Yet here you are, right after you've got back, doing the same old thing."

"I tell you I didn't do this on purpose," muttered Buck, with a scowl.

"Look me straight in the eye and say that again," demanded Bob.

Buck tried to, but before Bob's steady gaze his eyes wavered and fell, and his words fell away into an inarticulate growl.

"Aw, what right have you to put me through the third degree?" he snarled. "I've told you once that I didn't mean to, and that settles it."

"No, it doesn't settle it," cried Joe, whose temper was of the hair-trigger variety. "I'm going to give you a thrashing right here and now."

He made a move to throw off his coat, but Bob laid a restraining hand on his arm.

"Not this time, Joe," he counseled. "Every dog, you know, is entitled to one bite. We'll let this go for Buck's first bite since he got back. It isn't a dead certainty that he did it on purpose, though I believe he did. But I tell you this straight, Buck Looker, and you paste it in your hat. If anything like this happens again, you won't get the benefit of the doubt, and I'll give you the worst licking that you ever got in your life. I've thrashed you before, and you know that I can do it again. Now skip along before I change my mind and trim you right on the spot."

Buck looked at first as though he were going to resent Bob's words and tone, but a look at the latter's fists that had involuntarily clenched themselves, made him think better of it, and, picking up the ball which, obeying his will, had caused the mischief, he and his crony slunk away, favoring the group with a malignant stare that told he was only biding his time to attempt some further rascality.

"A precious pair of rascals," remarked Herb, disgustedly, as they watched the retreating figures.

"Oh, my prophetic soul!" exclaimed Joe. "What did I tell you when I saw them coming? Didn't I say they were cooking up something as they came along? I tell you they're hopeless."

"I'm afraid they are," agreed Bob, regretfully. "I really thought that after we'd saved Buck's life and after all his tears and promises, he might reform. But you can't make a silk purse out of a sow's ear. Buck's yellow through and through."

"We ought to have let the bears get him when they were clawing at the raft," declared Herb. "What hasn't that fellow and his gang tried to do to us? Tried to smash our radio sets and a dozen other things!"

"Feeling better, Jimmy?" inquired Bob, as the four chums resumed their interrupted walk.

"A little bit sore at the pit of my stomach, but the pain's going away," replied Jimmy. "It certainly knocked me out for a minute. Thought I'd never be able to breathe again."

"We'll just mark that up as another tally in our score against Buck Looker," said Bob. "And now let's try to forget that beauty and talk of something pleasanter. Did you fellows read about that radio test by the airplane mail pilot? It was in this morning's paper."

None of the others had noticed the item, but as they were all radio fans of the thirty-third degree, they were interested at once.

"Tell us about it," urged Joe, echoed by the others.

"You see," explained Bob to his eager audi-

tors, "the post-office department has been having a lot of trouble communicating from the ground to the mail planes and from the mail planes to the ground. In order to have the planes carry as little weight as possible, the radio apparatus they've carried has been of reduced size and the antenna facilities have had to be limited, too, so that the range of the aerial set hasn't been great enough to bring about the best results.

"Then, too, it's been hard to reach the speeding plane from the ground. This has been due to the noise of the engine and the local interference picked up by the receiver from the ignition and other electrical circuits of the motor.

"But now they've established at the Omaha field a one-thousand-watt transmitter, especially designed for the postal authorities, that has a range of from three hundred to five hundred miles in the day time and up to one thousand miles at night. And as none of the flying fields is more than five hundred miles from another, the field superintendents are able to keep in touch with the planes at almost any moment they are in flight."

"Sounds good," commented Joe. "But has it actually worked?"

"To the queen's taste," affirmed Bob. "One of the pilots tried it out yesterday between Omaha and North Platte. While traveling at the rate

of one hundred and twenty miles an hour on a three-hour trip, the pilot kept up a conversation with the superintendents of two stations, and they could hear each other as plainly as if they had been in the next room. What do you think of that?"

"Dandy," replied Herb. "Just think what that will mean to the pilot, especially in fog or storm. It won't be necessary for him to see the light from the air-mail fields so as to be able to land. The superintendent can give him his location to a dot, and he can come down with his eyes shut."

"Another triumph for radio!" exclaimed Joe. "I tell you, fellows, there's no limit to the possibilities of that wonderful science. One thing follows so closely on the heels of another that a fellow gets dizzy trying to keep up with it."

"It's as though one were living in fairyland," agreed Jimmy. "I have to pinch myself sometimes to see if I'm dreaming."

"We surely are living in an age of miracles," declared Bob. "I've given up thinking anything was impossible. I don't give the merry ha-ha to anything, no matter how unlikely it sounds. Nothing can happen more wonderful than what's taking place every day in radio. You can tell me that some day we'll be talking to the men on Mars—if there are any men there—and I won't be the one to say we can't."

"In other words, you're ready to fall for anything," laughed Jimmy, who had by this time recovered from the effect of the blow and was his own jolly self again. "But now, to get down to earth again, suppose you tell us where we're going. We're a long way from home."

"It's that appetite of Jimmy's that's beginning to talk now," gibed Herb. "He knows it's getting near supper time, and he doesn't need any watch to tell him so. That stomach of his is a regular chronometer."

"It came near having the works knocked out of it this afternoon," chaffed Joe. "But I see that it's still ticking. After all, it is getting rather late. Suppose we turn around and beat it for home."

"You've come so far, you might as well come a little farther," urged Bob. "I've an errand to do for my father at Mr. Baker's house. It's only about half a mile farther on."

"Now I know why Bob spun us that yarn about the air-mail pilot," laughed Herb. "He wanted company, and he tried to keep us so interested that we wouldn't notice how far we were going."

"Dead wrong," declared Bob, in denial. "It wouldn't be worth going to all that trouble to beguile you innocent boobs. But come along now and we'll be there in a jiffy."

They swung around a turn in the road, and

Bob, who was slightly in advance, gave a startled exclamation.

"Look! Look!" he cried.

The others looked, and turned white in consternation.

What they saw was a large automobile that had crashed through a fence alongside the road and was rolling down into a deep gully, while from it rose loud yells for help.

CHAPTER II

A NARROW ESCAPE

For a moment the four Radio Boys stood as though paralyzed in the shadow of an impending tragedy.

Bob Layton was the first to spring into action.

"Come along, fellows!" he shouted. "Hurry! We've got to get those people out! It may be a matter of life or death!"

In an instant the boys were running like deer to the scene of the accident.

They reached the shattered fence and peered over into the gully. The sides were steep, and the car had fallen a distance of thirty feet. It had rolled over and over, and now lay upside down amid a welter of broken glass and splintered wood and twisted steel. The engine was still going, and from the wreck arose groans and shouts that testified that the occupants of the doomed machine were still alive.

Sliding, scrambling, and often falling, the boys got down somehow into the ravine and rushed to the car.

Bob, who reached it first, with the others close on his heels, peered into one of the windows, and in the dim light made out what seemed to be four men thrown together in a heap. Two of them seemed to be stunned and made no movement, but the others were struggling desperately to extricate themselves from the tangled mass of bodies.

The car was an enclosed one, and the small windows had jagged splinters of glass sticking in the frames.

"We're here to help you," Bob shouted to the men inside. "Here, fellows," he cried to his companions, "give me a hand with this door."

They tugged at the door with all their might, but it had become so jammed that it resisted all their efforts. Again and again they pulled until it seemed as though their arms would be drawn out of their sockets, but in vain.

"Let's try the one on the other side," cried Bob, suiting the action to the word.

But here again the twisted framework refused to budge.

"No use!" exclaimed Bob, when convinced that their efforts were fruitless. "We'll have to get something to smash in the door."

The boys looked around them, and Bob's eyes lighted on a heavy joist that had been left there by some workmen on the railroad near by.

"The very thing!" cried Bob, picking up one end. "Here, Joe, grab it up near the other end and we'll use it as a battering ram."

Joe was stooping to comply when a horrified cry came from Jimmy.

"Fire!" he shouted. "The automobile's on fire!"

Joe and Bob followed the direction of Jimmy's pointing finger, and their hearts seemed to stand still as they saw a line of fire leaping along the car from the broken gasoline tank.

And while they stood gazing at the awful menace, it may be well, for the benefit of those who have not read the preceding volumes of this series, to tell who the boys are and trace their adventures up to the time this story opens.

All the boys were residents of the town of Clintonia, a prosperous, wide-awake community, pleasantly located on the banks of the Shagary River, about a hundred miles away from New York City. Bob, who was about sixteen years old, was the son of the leading druggist of Clintonia, a man much respected by his fellow citizens and a foremost figure in civic activities. Bob was a general favorite because of his frank and sunny nature and his straightforward character. The elder people liked him, and among the younger element he was the natural leader, ever to the front in baseball, football and other youth-

ful sports. He was tall for his age, of dark complexion and with eyes that always looked straight at one without fear or favor. His courage had been tested too often to admit any doubt of its quality. He was cool and resourceful, and never avoided trouble, though he did not go out of his way to find it.

His closest chum and companion was Joe Atwood, fair-complexioned and blue-eyed, who, though he resembled Bob in being manly and likable, had a hot temper that often got him into trouble and would have done so oftener had it not been for the cooler disposition and counsel of Bob. Joe's father was a prosperous physician of the town. The two boys were inseparable.

They were not exclusive, however, and had as congenial companions two slightly younger boys, Herb Fennington and Jimmy Plummer. Herb's father kept the largest general store in town. Herb could scarcely be described as a chip off the old block, for while his father was industrious, Herb dearly loved his ease, and would have passed work by without a greeting if he had met it on the street.

Jimmy's father was a carpenter and contractor, and he must have fed Jimmy well, for the latter was fat and chunky and notorious for his appetite, especially for doughnuts, of which his mother made most excellent specimens. Jimmy

appreciated them so well and so often that he had gained the nickname of "Doughnuts," the fitness of which was recognized by all who knew him.

While the four friends would have been congenial mates under any circumstances, they were drawn still more closely together by their joint interest in radio. They had been strongly attracted towards that marvelous science when its wonders first burst upon the world, and with every succeeding development of its magic qualities their interest had deepened and strengthened. They soon got to a point where it absorbed most of the time they could spare from their school studies and their sleep, and this became so apparent that they had been given the name of the "Radio Boys," by which they were frequently referred to.

It is an honor sometimes to have enemies, and the Radio Boys were not without that honor. The tougher element of the youth of Clintonia had as their leader a fellow named Buck Looker, who, though his father was one of the richest men in the town, chose to associate with low companions. Two of them especially, Carl Lutz and Terence Mooney, were often with him and helped him carry out the tricks that Looker planned. The trio were united in a common hatred of the Radio Boys, upon whom they had

tried to put over many scurvy schemes. The fact that these had been circumvented as a rule made them all the more bitter in their enmity.

One of the most valued friends of the Radio Boys was Doctor Amory Dale, the pastor of the Old First Church of Clintonia. The doctor had been a star athlete in his college days and still retained the youthful spirit and outlook that kept him in close sympathy with the boys. He was also deeply versed in the mystery of radio, and had been of great assistance to the Radio Boys in giving them pointers on the new science. Again and again they had brought their problems to him, and he had helped them solve them.

The Radio Boys won prizes in a competition for the best home-made radio sets; they were instrumental in tracking down by means of radio a rascal who had defrauded an orphan girl, and this involved them in a host of thrilling adventures. How this all came about is told in the first book of this series, entitled: "The Radio Boys' First Wireless; or, Winning the Ferberton Prize."

In other volumes are described their further exciting experiences in the realm of radio. At the seaside, where they had carried their radio sets, they learned a lot about the communication between the shore and ships, and in a terrible

storm were able by a message to save the vessel on which their own people were voyaging. They also were instrumental in rescuing people who had been run down by a stolen motorboat and in balking another scheme of Buck Looker's. A little while later, they had the fascinating experience of being placed on a sending program and broadcasting their work to hundreds of thousands of hearers. Turning from the sea to the woods, they were able to overhear and expose a scoundrelly plot of financial sharpers and to secure the return to jail of desperate escaped convicts.

In the volume immediately preceding the present one, the boys gained some insight into the methods of the Forestry Service of the United States Government and served for a while with the hardy men who have saved from the flames uncounted acres of the national domain. They themselves were trapped in a terrible forest fire, and the adroitness and presence of mind with which they saved themselves from what looked like certain death are narrated in the book entitled: "The Radio Boys with the Forest Rangers; or, The Great Fire on Spruce Mountain."

Now to return to the boys as they stood by the wrecked automobile, appalled by the stream of

fire that was running from the broken gasoline tank and threatening the lives of the injured occupants.

"Quick!" cried Bob, conquering his consternation. "Jimmy, you and Herb gather all the dirt you can and throw it on the fire. Joe, lend a hand with this joist and smash in the door."

Herb and Jimmy set to work frantically. They had no implements, and were forced to use their hands, which were soon scratched and bleeding, though in their excitement they took no note of that.

As Bob and Joe hurried with the joist to the door, a deep voice that had in it the habit of command came from the car.

"Give me a hand and help me get this man through the window."

The two boys dropped the joist and caught hold of the head and shoulders of a limp body. They pulled it through the window, though much impeded by the jagged glass.

"Hurry, fellows!" came in a wild shout from Jimmy. "This fire is getting beyond us."

Spurred on by the shout and their own desperation, Bob and Joe dragged the unconscious man to the side of the road.

"Give us the next one!" shouted Joe.

"There isn't time for that," came the deep voice. "The body of the car is on fire, and it's

already scorching our clothes. Smash in the door."

Bob and Joe lifted the piece of joist and hurled it against the door. There was a splintering crash, and one of the hinges gave way.

"Once more," came the calm voice from within.

Summoning all their strength, the two boys again drove their weapon against the door, and this time it fell in with a crash. Herb and Jimmy came to the assistance of Bob and Joe, and they seized the remnants of the door and drew them out, leaving a clear passage.

"Good work!" commended the still steady voice. "Get hold of the man nearest you."

They took hold of one of the men, who, though dazed, was able partly to help himself, and dragged him out. Then a third man staggered out, assisted by the eager hands of the boys. Following him, the last occupant emerged.

At a glance, the boys knew that he was the owner of the voice.

CHAPTER III

THE NAVAL CAPTAIN

WHY the Radio Boys knew that this man had spoken the words that had made them wonder at his calmness, they could not have told. But they had no doubt of the fact.

There was something about him that told of long habit of commanding others. And there was more than that. They could see that he was a man who had learned to command himself—the most difficult feat of all.

He was tall and spare and appeared to be about forty years of age. His face was marked with lines that bespoke discipline and character. His eyes were keen and had the look of those that have been accustomed to peer into distant spaces. They were eyes that could be stern and unflinching, and yet with tiny creases at the sides that showed they could twinkle with friendliness and good fellowship.

The instant he stepped foot to the ground he took command of the situation.

"You boys have saved our lives," he said, "and I thank you for myself and the rest of us. I'll thank you more at length later on. Suppose you get me some water from that little brook over there, and I'll fix up these friends of mine."

He reached quickly under the seat of the tonneau, which was now almost entirely in flames, and drew out a small medical kit, scorching his hand as he did so.

The boys ran for the water, which in default of other utensils they had to carry in their caps, and brought it to the leader of the party, who had thrown off his coat, rolled up his sleeves and was going over the wounds of his companions with the skill of a professional surgeon.

Luckily, the injuries, though painful, proved not to be serious. Most of them were due to the shock and the fall. There were no bones broken, though all had bruises and wounds on hands and faces, from which blood was trickling.

Again and again the boys brought water, and, in compliance with the directions given them, dashed it over the faces of those who had been partially stunned. The cold impact revived them, and soon, under the ministrations of the impromptu nurses, the men were in full possession of their senses.

Not till then did the leader rise to his feet, wash his face and hands, and resume his coat.

By this time the car was a roaring furnace. It was evident that it was doomed and that before long it would be only a tangled mass of metal. The faces of all were pale, as they watched what might so easily have been a funeral pyre.

They stood contemplating the terrifying spectacle for a minute or two, each one busy with his thoughts. Then the leader of the men turned to the Radio Boys.

"It's only due to the mercy of heaven and the presence of mind of you boys that we're alive at this moment," he said gravely, "and I want to thank you with all my heart, both for myself and my friends, who are hardly in condition to speak, for what you have done for us. You're fine specimens of American boys, and it's a mighty lucky thing for us that you happened to be on hand."

"We only did what any one else would have done under the circumstances," disclaimed Bob modestly, and his companions nodded their assent.

"Permit me to doubt that," said the stranger, with a smile. "There are plenty who would have done nothing except, perhaps, to run for help. That wouldn't have done any good in this particular case, for we'd have been past rescue before assistance could have been brought to us. You helped us yourselves, and you did it with a

quickness and a coolness that are beyond praise. But I see that you are as modest as you are brave, which makes me all the more glad to be indebted to you. But now tell me your names. I can assure you that I shall never forget them, and I know my friends won't."

As he was addressing himself especially to Bob, the latter gave his name, first having told those of his companions. In turn, the stranger introduced the boys to Mr. Hazlett, Mr. Bryan and Mr. Esterbrook, his fellow travelers in the ill-fated automobile.

"My own name is Springer," he said, in conclusion. "Captain Amos Springer of the United States Navy."

"I was sure that you belonged to the army or the navy," ventured Joe.

"So was I," said the other boys in chorus.

"How was that?" asked the captain. "You see I'm not in uniform. What made you think I was an officer?"

"Oh, I don't exactly know," replied Bob, in some embarrassment. "We just felt it. Something in the way you spoke while you were in the car made me at least feel that you were used to commanding men."

"You sounded as if you weren't a bit afraid," put in Jimmy.

"And then, too, you waited till all the others

were out before you got out yourself," added Joe. "That reminded me of the navy, where the captain is the last man to leave the ship."

The captain's face showed a slight flush of embarrassment beneath the tan.

"Tradition of the service," he laughed, waving away the implied compliment. "I see I'll have to watch my step with such sharp eyes and ears about. But now let's get back to the present situation. How far are we from the town?"

"Not more than a couple of miles," answered Bob. "What can we do to help you? We can send the hospital ambulance down for your friends, if you like."

"Oh, I guess we won't need that," said Captain Springer, looking around among his companions, who also shook their heads negatively. "There is none of us seriously hurt, and a day or two of rest in some good hotel will set every one to rights. What you can do, if you will, is to stop at a garage and have a car sent out for us. What's the best hotel in town?"

"The Sterling House is as good as any," replied Herb.

"All right then, that's where we'll go," rejoined the captain. "I won't be sorry to stay in town for a day or two, anyway, as that will give us a chance to see your parents and congratulate them on the kind of boys they've got. Then,

too, we're a pretty torn and bedraggled lot, and will have to get ourselves new outfits before we're presentable."

"We'll hurry back then to town and send the car to you," said Bob, rising from the stump on which he had been sitting. "I can promise that it will be here within three-quarters of an hour."

With the farewell thanks of the grateful party ringing in their ears, the Radio Boys, after delivering a message at Mr. Baker's, made rapid time back to Clintonia, where they stopped at the first garage, urged the pressing need of haste, and themselves watched the car go whizzing out to the point they described. Then, unutterably weary from the strain and excitement, they turned toward their respective homes.

"Gee!" exclaimed Jimmy, as his short legs tried to keep up with those of his companions, "have a heart, you fellows, and let up a little. I feel like something the cat dragged in."

"I guess we all do," replied Bob, as they moderated their steps in compliance with Jimmy's urging. "It's been some strenuous day!"

"I'll tell the world it has," agreed Joe. "Talk about excitement! That seems to be our middle name."

"I feel as if I'd like to slump down in a chair and never get up again," remarked Herb.

"Thought that was the way you always felt,"

joked Joe, cleverly dodging the pass that Herb made at him.

"Do you fellows feel too tired to come around to-night?" asked Bob, as the group paused at the gate of his home. "I'm fixing up that new vario-coupler of mine, and it's a dandy."

"I'll be there," replied Joe, all his weariness forgotten at the magic thought of radio.

"I guess I will," replied Herb. "But, oh, boy, that little bed of mine looks awfully good to me!"

"I'll see how I feel after supper," conceded Jimmy.

"You won't see anything after supper," gibed Joe. "You'll be so full that you can't see out of your eyes."

"I'll need a lot to keep me going," explained Jimmy. "I've gone through more to-day than the rest of you fellows. Nobody hit you with a baseball in the pit of the stomach."

"Sure enough," laughed Bob. "I suppose that left a dent that you'll have to straighten out. Well, so long, fellows. Come around if you can."

It goes without saying that there was an increasing buzz of conversation around the supper tables in four Clintonia homes that evening. The boys were full of the afternoon's adventures, and in response to eager questions were forced to tell over and over again the details of the acci-

dent. They almost forgot to eat in the excitement of the narrative. All, that is, except Jimmy. He never forgot.

After supper Herb conquered his desire for bed, and as Jimmy, belying Joe's prophecy, could still see out of his eyes, the two went around to Bob's home, where they found that Joe had preceded them.

For a time the boys talked over the stirring happenings of the afternoon, and then they proceeded to Bob's room, where they were deep in examining the improvements to his radio set when the doorbell rang.

"Wonder who that is," remarked Joe.

"Another reporter perhaps," suggested Bob. "One has been here already asking me to tell him the sad story of my life and wanting to get a picture for to-morrow's paper."

"I know that voice!" cried Herb, who had gone to the door and held it ajar. "That's no reporter. It's Captain Springer!"

CHAPTER IV

THE ICEBERG PATROL

AN interested stir ran through the group of Radio Boys at the announcement that it was Captain Springer at the front door.

"I suppose he's started calling around to see our folks, as he said he would," remarked Bob. "They'll be calling us down in a minute."

Sure enough, a short time later, a call came from the foot of the stairs.

"Come down, Bob, and bring your friends with you," came the voice of Mr. Layton. "There's a friend of yours here who wants to see you."

The boys hurried down and went into the living room, where they saw Captain Springer in animated conversation with Mr. and Mrs. Layton.

The captain rose to his feet and greeted each of the boys with a warm grasp of the hand.

"I'm in luck to find you all together," he said genially, as he resumed his seat. "Though I'm

going to call personally at each of your homes," he added. "I've just been telling Mr. and Mrs. Layton something of what happened this afternoon. Of course I know you've already told them about it, but I know how modest you are, and I wanted them to know not only the truth but the whole truth."

The boys blushed, and the captain laughed.

"You'd have blushed still more if you had heard all I said," he observed. "But at that I didn't say enough. Your parents ought to be proud of you."

"Here are two parents that are," observed Mrs. Layton, and her husband smiled assent.

"I was talking with an old friend of mine some weeks ago," remarked the captain, "and we were discussing whether American boys were what they used to be in the older and rougher days, when even the younger members of the family had to be trained to hold off an attack by Indians. He held that there was still as much good stuff in them as there ever was, and to prove it he told me about a group of boys that were with him in Spruce Mountain not long ago. And if what he told me was true—and I never knew him to say anything that wasn't—he proved his point."

"Tell us about it," urged Mr. Layton, exchanging a meaning glance with his wife, while the

boys looked at each other with an unspoken question in their eyes.

"I don't remember that he mentioned names," went on the captain. "Simply said that they were interested in radio and that at his invitation they'd come to spend a few weeks in the mountains. He's a Forest Ranger and uses radio a lot in his work, and I suppose that's what got him in touch with the boys. They went there just for a lark, but while they were there a big fire broke out—one of the toughest fires to fight he'd ever seen. Well, Mr. Layton, he told me that those boys—none of them over sixteen and some scarcely that—behaved like veterans. They fought the fire with all their strength, were here, there and everywhere, and did as good work as any of the rangers who had been accustomed to fighting fires all their lives. And when they were finally trapped by the flames they made a raft, got out on a lake, and by rigging up some kind of radio contrivance, fought off some bears that tried to climb on the raft. Bentley got quite worked up while he talked to me about them. Couldn't say enough in praise of them."

"Did you say his name was Bentley?" asked Mr. Layton.

"Yes, Paul Bentley," replied the captain. "Why, do you know him?" he asked quickly.

"I know him very well," replied Mr. Layton,

with a quiet smile. "In fact he's one of the best friends I have."

"And do you know the boys he was speaking of?" asked the captain.

"I certainly do," was the amused reply. "Here they are, the whole bunch—count them—four of them, the very boys you've been talking about."

For once the captain lost his calm repose of manner.

"Well, well, that's one on me!" he exclaimed. "To think I've been telling you about something you know far better than I do! I'll have to write Bentley and tell him about the coincidence. He'll be pleased to know of this fresh proof of his good judgment."

"If he thinks as much of us as we do of him, it's plenty," said Bob. "Mr. Bentley is one of the finest men we ever came across."

"He surely is," assented the captain warmly. "I've known him for years, and he's my ideal of what a man should be. He chose the land for his life work and I chose the water for mine, but every once in a while we find ourselves together and have a chat about old times."

"You are an officer in the navy, I understand," remarked Mr. Layton.

"Yes," replied the captain. "I've been captain of a destroyer for some years. Saw service in European waters during the war. But I'm con-

templating a change just now. This limitation treaty has tied up a lot of our ships and is going to tie up more, and I've no fancy for shore duty. So I've applied for a transfer to the Iceberg Patrol, and I've received assurances that my application would probably be granted."

"The Iceberg Patrol!" exclaimed Bob. "I remember Doctor Dale telling us about that once. That's the Government service that aims to warn steamships in the ocean lanes against icebergs, isn't it?"

"That's it," assented the captain. "But it isn't only our Government that does that. Fourteen other nations have combined to do the same thing, and we do our part along with the rest. That helps to make it interesting. There's a friendly rivalry between all the nations to prove which fleet is the most efficient."

"It must be wonderfully interesting and exciting," said Joe, to whom the frozen North had always made a strong appeal.

"It's all of that," replied the captain. "That's why I'm seeking the appointment. It was rather exciting work over on the other side when we didn't know what moment we'd strike a mine or be torpedoed by a submarine. Now in these piping times of peace, I feel that I'm getting rusty and I want the stir and danger all over again, and I look for plenty of it up there."

"The Iceberg Patrol is a comparatively recent development in the naval service, isn't it?" inquired Mr. Layton.

"Yes," was the reply. "The thing that really stirred our own and other governments to action was the terrible disaster to the *Titanic* in nineteen hundred and twelve. The world rang with the horror of that. You, Mr. Layton, remember that an underwater spur of an iceberg ripped through her side as she turned in an effort to escape and sank her with the loss of hundreds of lives. The determination not to permit a thing of that kind to happen again caused the nations to get together and establish the Iceberg Patrol."

"It was a frightful calamity," remarked Mrs. Layton. "I suppose that the same thing has happened more than once, only on a smaller scale."

"No doubt of it," assented the captain. "The records of the sea are full of stories of vessels that have never reached port and of which no traces have ever been found. Many of these, no doubt, met the same fate as the *Titanic,* but as all on board were lost, the tale could never be told.

"You see," he went on, as he settled himself deeper in his chair, "it used to be supposed that a captain could know of the presence of an iceberg in fog or at night by a sudden damp and

vault-like chill that came into the air. But experiments have proved that this has very little basis in fact. It may have helped sometimes, but it is wholly unreliable.

"And if a ship ever strikes an iceberg, I suppose it's good-night for the ship," ventured Herb.

"It always is if it hits it full," replied the captain. "The ship has no more chance than if it struck the Rock of Gibraltar. Why, do you know that some of those monster bergs are ten times the size of the Woolworth Building in New York City?"

"Gee!" exclaimed Jimmy. "The Woolworth Building is seven hundred and ninety-two feet high. Do you mean that the iceberg is ten times as high as that?"

"That's exactly what I mean," rejoined Captain Springer, with a smile. "Not that all of that shows above the water. You know that seven-eighths of an iceberg is submerged, so that of its total height only one-eighth rises above the surface. But if you measured from the bottom to the top of the berg it would be many thousands of feet in height. So you can see what chance a ship would have if it struck one of those floating mountains. It would be crushed like an egg-shell."

His hearers involuntarily shuddered at the thought.

"I suppose radio is your chief reliance in giving warning to vessels of the presence of icebergs," remarked Mr. Layton.

"Practically the only reliance," replied the captain. "If the transmitting set of the vessel were put out of commission, she might as well be laid up in port for all the good she could do."

"Trust old radio to do the work!" said Bob, with enthusiasm.

"I ought to tell you," observed Mr. Layton, with a smile, "that when radio is mentioned among these boys, they all sit up and take notice. Every one of them is a radio fan."

"Is that so?" asked the captain. "Then that's another bond between us, for it's my most fascinating study. I've studied it day and night, awake and asleep."

At this last word, the boys looked at each other in surprise.

"Aren't you joking when you say you learned it while asleep?" queried Mr. Layton.

"Not a bit of it," replied the visitor. "One of the new developments at the naval stations has been a method of teaching students to send radio code messages more speedily by giving them data through their earpieces while they are asleep. I know that sounds suspiciously like a fish story, but it's an actual fact."

"How is it done?" asked Bob.

"What's the idea?" queried Jimmy.

"It came about through the experience of a man who was in charge of a ground school of radio instruction at an air station," explained Captain Springer. "While he himself was practicing receiving words at the rate of thirty-five a minute, he fell asleep, but the mechanical sender which he was using continued to send messages to him. When he awoke, he claimed that he was able to catch from ten to fifteen more words a minute than he had previously done. His theory was that while he was asleep, his subconscious mind had been trained to the higher speed."

"Must have sounded like a pipe dream when he first told that story," put in Jimmy.

"So it did," agreed their visitor. "But he was so earnest about it that the naval authorities entered on a series of tests and found that he was right, and now it's a regular part of the instruction. Before turning in at night the student adjusts on his head the receivers that are used in the ordinary class. A regular watch is stood through the night by expert operators on the sending key, and throughout the night they send at high speed—about ten words in excess of the student's ordinary capacity of receiving. It has been found that in his conscious hours on the following day the student is able to receive

messages at the rate they were sent to him while asleep."

"By jinks!" exclaimed Herb, with more energy than he usually showed, "that hits me hard. I'm going to take a hack at it myself."

"Herb thinks he won't have to work so hard that way," chaffed Joe, and there was a general laugh at the lazy boy's expense.

"I suppose you have a pretty good set yourself, since you're so interested in it," said the captain, addressing himself to Bob.

"Fairly good," answered Bob modestly. "I get Cuba without any trouble, and I've often picked up the signals from Nauen, Germany, and Eiffel Tower, Paris."

"Then it must be more than fairly good," returned the visitor. "I'd like to have a look at it, if you don't mind."

"Only too glad," was the reply. "It's in the room upstairs."

Excusing himself to Mr. and Mrs. Layton, the captain accompanied the boys to Bob's room.

He examined the set with the eye of an expert, and Bob was delighted with the keen appreciation the visitor showed of the high degree of perfection to which he had brought his set almost entirely by his own endeavors, except for what assistance he had secured from his comrades and Doctor Dale.

"Put on the ear pieces and see how perfectly you can hear anything that happens to be going on," urged Bob.

"All right," replied the captain, suiting the action to the word. "Though with this terrible storm that's come up, old man static will be getting in his fine work."

As a fact, the wind outside was whistling along at a rate of seventy miles an hour. A sudden storm had come up within the last two hours, and a gale was sweeping in from the Atlantic, accompanied by sheets of blinding rain.

For a minute of two the captain listened, adjusting the mechanism, but apparently unable to distinguish anything clearly. Then suddenly a look of interest, not unmingled with alarm, flashed into his face. The alarm deepened as he listened.

"What's the matter?" asked Bob, quickly.

"Matter enough," replied the captain. "The biggest dirigible of the United States Navy has been torn from her moorings and is adrift in the storm!"

CHAPTER V

BUFFETED BY THE GALE

"You mean the *Shooting Star?*" asked Joe, breathlessly.

"Yes," was the reply. "And she's sending out radio messages. I caught one just now. She's fighting the storm somewhere up in this section of the State."

Bob rushed to the window and threw it open. The rain blew in fiercely, but he did not mind that as he lifted his face upward and scanned the skies.

Against the lowering clouds he could at first see nothing. Then his eyes discerned what seemed to him a long cigar-shaped object hovering a few hundred feet above the earth.

He dashed the raindrops from his eyes and looked again. This time the shape seemed to be nearer, and he could see more clearly.

"I think I see it!" he cried, and his comrades and the captain crowded about him to get a look.

"That's it!" proclaimed the captain. "I saw

her more than once while she was making her trial tests. But I can just see the stern now. She's passing directly over the house."

"Let's go to the attic!" cried Joe. "We can see through the skylight."

They all hurried up the stairs, and through the skylight could plainly see the mammoth airship, which was now so close that she could be discerned very distinctly.

"She's dangerously close!" cried the captain. "Closer to the ground than her pilot knows. He ought to be told. But you have only a receiving set."

"I'll 'phone to Doctor Dale," cried Bob. "He has a strong transmitter, and knows how to use it."

He rushed downstairs and got Doctor Dale on the telephone. The latter's quick intelligence grasped the situation instantly.

"I'll notify her," he said. "Hold the wire."

A moment later a shout came from Joe.

"She's rising!" he cried. "She must have got the doctor's message. She's heading toward the southeast."

Two minutes later Doctor Dale's voice came over the wire.

"I warned her," he said. "And I've just got this answer:

" 'Clintonia. Thanks for message. Are get-

ting her under control. All well on board. No fatal damage to the craft. Are confident of riding the gale and taking her home.' "

Bob thanked the doctor, ran upstairs, and reported.

"There spoke the spirit of the United States Navy airmen!" exclaimed the captain, with justifiable pride in his arm of the service.

They watched the great dirigible, as she tacked and slanted, jockeying to take advantage of the gale, and finally disappeared in the darkness. Then, still quivering with excitement, they retraced their way down the stairs.

"Another victory for radio!" exclaimed Bob. "Perhaps that message saved her from destruction."

"I shouldn't wonder," replied the captain. "She was certainly nearer the ground than she meant to be or thought she was. At that rate of descent, she might have struck the earth in two minutes more. And then what might have happened to the airship and her crew I don't care to think about. No doubt she's got other messages, too, to-night at various places that have helped her to escape disaster."

"I wonder how she got adrift," remarked Jimmy. "I thought that she was enclosed in a hangar."

"She has been until recently," explained the

captain. "But a short time ago she was taken from the hangar and fastened to a high mooring mast, to which she was secured by cables, and where she floated at right angles to the mast. You see, it required the services of about three hundred men to get her in and out of her hangar, and that took a lot of time and work, besides which there was always the danger of injury to her envelope in getting her in and out. Now, with the mooring mast, she needs the services of only about three officers and fifteen men."

"How do you suppose she got loose?" queried Herb.

"I suppose a terrific blast of wind tore her from her moorings," conjectured the visitor. "You see, with her six hundred feet and more of length, she presents an enormous surface to the wind. Perhaps her cables weren't strong enough to stand the strain. We'll read all about it in to-morrow's papers. But now I think of it, we won't have to wait that long. The air must be full of messages now, telling all about it. I'll see what I can catch."

He resumed the earphones, and the boys listened eagerly as from time to time he repeated what he could pick up from the air. This was necessarily fragmentary and disjointed, but they could piece the bits together well enough to make up a fairly complete story of what had happened.

It appeared that the sudden storm had caught the airship when it had on board a crew of twenty-one men. Luckily, these had included the pilot, a man of great technical skill, as well as of coolness and courage. All accounts agreed that in the great emergency all on board had carried themselves in a way to make their countrymen proud of them.

Disaster had threatened the craft at the very beginning. The blast that snapped the cables had driven the ship close to the ground. She was within a few feet of it when she let go her water ballast, and, with the resulting buoyancy, was able to rise to a safer height.

But up there the wind drove her with resistless force until she was more than sixty miles inland. How badly she had been hurt, no one of her crew at that time fully knew. It developed later that a big hole had been torn in her prow, where it had been ripped from the cable, and that a long strip of her envelope had been peeled away. But, regardless of what might be coming to them, the pilot and the crew kept their heads, and in an exhibition of the finest kind of airmen's skill held their craft in hand.

It was only after the captain felt sure that the airship was well on her way to her hangar that he laid the earphones aside, with a sigh of relief that was echoed by the Radio Boys.

"Well, that's over," the visitor remarked. "The *Shooting Star* may be wounded, but she's still afloat, thank heaven."

"She must have felt lonely to-night, for there weren't any other stars to be seen," remarked Joe.

"That's a fact," admitted the captain, with a smile. "But perhaps before long her crew will have a sight of the stars farther north. That is, if she makes her projected flight to the North Pole."

"I've heard she was going to try to make that trip," put in Bob. "Perhaps this accident will put a crimp in it."

"I hardly think so," affirmed the captain. "Probably she isn't so badly hurt that she can't be repaired in a month or two."

"What's the idea of going to the Pole, anyway?" asked Joe. "It seems to me like taking an awful lot of risk for a very slight advantage. Peary's been to the Pole, anyway."

"True enough," assented Captain Springer. "I don't understand that the Government in any way questions the correctness of Peary's account or the fact of his discovery. But, as the Secretary of the Navy said the other day, there is a vast unexplored area in the vicinity of the Pole that is a constant challenge to the United States. If we don't discover and map it, some other Gov-

ernment will, and he wants the glory to come to this country.

"Much of this area is supposed to be land. We have a stake in it because of its nearness to Alaska, our farthest outlying possession. The trip, too, would probably result in scientific discoveries of the highest value. And whatever land might be discovered may be ultimately of advantage to this country for strategic, as well as other, purposes. In the days of sea traveling, that land, if it exists, was inaccessible. But in these days of airplanes and dirigibles and radio, communication might be easily established and maintained."

"It will be a mighty long trip, as well as a cold one," mused Bob.

"It will be all that," agreed Captain Springer. "It is proposed to have the *Shooting Star* cruise over a million square miles of unexplored territory. It is planned that she will first go to San Diego and Seattle on the Pacific Coast and then to Nome, Alaska. At Nome there will be waiting for her a naval vessel with a mooring mast. There the airship will be moored while she is supplied with fuel and provisions. From Nome to the North Pole is about one thousand five hundred miles. She may go over the Pole and from there to Spitzbergen, about six hundred miles farther on, and then return by way of England to the United States."

"Some trip!" exclaimed Joe.

"She's already made longer trips," replied the captain. "She made one continuous trip to St. Louis and back, a distance of about two thousand five hundred miles. The trip from Nome over the Pole to Spitzbergen would be only two thousand one hundred miles."

"But though the trip is shorter, it's more risky," objected Jimmy. "If she'd had to come down in this country, she'd still have been in a civilized land. Up there there will be nothing but ice and seals and bears, and maybe a few Eskimos."

"Of course there are greater risks," conceded the captain, "just as there are greater dangers in flying over water than over land. But risks are like food to the men of the service. They just eat them up. Then, too, the *Shooting Star* will have a radio set on board that can transmit more than a thousand miles. And the supply boat at Nome will have three airplanes equipped with skis for landing on ice, water, snow and land. They'd hurry to the airship's help if she radioed for any. They have a cruising radius of two thousand miles."

"Suppose the airship had to come down on the ice?" inquired Bob. "How would they be able to handle her, if even now it requires three or four

hundred men to hold her when she lands on the ground?"

"She's having a special anchor made now for holding her in snow or ice," was the reply.

"Suppose she runs short of gas?" queried Jimmy.

"She'll no doubt have plenty to start with," was the rejoinder. "You see, in the Arctic there are practically no changes in the temperature from night to day, resulting in expansion and contraction of the helium gas in the bag. She could be adrift an indefinite period without losing gas enough to cause any trouble."

"It certainly seems to have been all figured out," remarked Bob.

"Nothing has been overlooked, I imagine," said the captain. "Of course, it's only a project as yet, and, for some reason, the trip may never come off. But if it does, I have no doubt that the result will reflect credit on the men who take part in it and add new luster to the Stars and Stripes. You boys will see——"

The words died on the captain's lips. The boys jumped to their feet. All had been startled by a heavy crash on the roof of the house!

CHAPTER VI

TUNING IN

"It's the *Shooting Star!*" cried Jimmy. "She's been driven back and fallen on the roof!"

Appalled by the possibility, Captain Springer and the boys rushed up the stairs, followed by the others in the house.

But the sight of a crushed-in roof that they half-expected to see was spared them. It was intact, but the glass of the skylight had been shivered, and across the open sash lay a heavy bough of a tree that had been torn by the gale from the parent oak near by and flung to the roof.

"Bad enough, but it might easily have been worse!" exclaimed Bob. "If that had been the airship, it would have been good-bye house."

Mr. Layton and the boys boarded up the skylight temporarily, and, immensely relieved, all went downstairs. The captain looked at his watch with a start.

"I've stayed too long!" he exclaimed.

"You can't stay too long," declared Joe.

"Or come too often," added Bob.

"That's mighty good of you," said Captain Springer, with a smile. "And I'll never forget that if it hadn't been for you boys, I shouldn't be here at all."

The boys were still enthusiastic about his visit when they met the next morning.

"Isn't the captain a dandy?" demanded Bob. "When he got to talking last night, I could have listened to him until morning. I'd like nothing better than to be with him on the iceberg patrol."

"I wouldn't mind taking a whirl at iceberg hunting myself, if I wasn't tied down to school all the time," grumbled Herb. "Seems as though I'd never be through school and be able to do what I want to."

"Maybe if you spent more time thinking about Latin and math. and less about jokes, you'd get through sooner," remarked Jimmy, taking a huge bite out of a big red apple.

"Listen to Socrates talking!" exclaimed Herb, in disdain. "You haven't got even the beginnings of a sense of humor, but I don't see that you're getting through high school any sooner than I am, on that account."

"Perhaps not," agreed Jimmy, complacently. "But I'm not making people miserable by springing ancient jokes on them all the time."

"Ancient!" exclaimed Herb, in an injured tone.

"That's the last thing in the world you can say about my jokes. Why, I think of most of them myself, so how can they be ancient?"

"Well, they seem that way, at any rate, after we've heard them five or six times," retorted his rotund friend.

"Jimmy's right there," observed Joe. "Even hearing them once is hard on anybody."

"Just for that I won't tell you the latest joke," said Herb. "It was a swell one, too."

"Thank goodness for that!" exclaimed Joe, so fervently that Bob and Jimmy laughed heartily. Herb, however, appeared to have temporarily lost his vaunted sense of humor, for he seemed unable to see anything humorous in the situation.

"Never mind, Herb," consoled Bob, seeing that Herbert was slightly "peeved." "We'll tune up the old radio set to-morrow night and listen to some of the broadcasted jokes. I've heard lots of them that were worse than yours."

"Yes, and I've heard lots that were better, too," retorted Joe.

"That's just your opinion," said Herb, loftily. "As you are no good as a judge of humor, though, I won't worry about what you think."

"That's the spirit," laughed Bob. "Joe really enjoys your jokes, anyway, Herb, only he won't admit it. Why don't you own up to the truth, Joe, and make Herb happy?"

"Oh, sure, I like them—just about as much as Jimmy would like a doughnut famine," retorted Joe, grinning.

"There you are—back at me again," said Jimmy, plaintively. "When in doubt, soak Jimmy. He's got no friends. I notice though, Joe, that when I have a bag of doughnuts, you're pretty keen about getting your share."

"Quit your squabbling, you fellows," counseled Bob. "And, by the way, don't forget that we're due at Doctor Dale's house this evening. He's been making a new crystal set that he thinks is dandy and he wants us to listen in on it."

"A crystal set!" exclaimed Jimmy, in some surprise. "What's he going back to that for? The tube lies all over the crystal, to my way of thinking."

"Of course it does in many ways," agreed Bob. "But the crystal is coming back into favor again for some purposes, and the doctor says it's surprising what results he can get from it."

Soon after supper they were at the doctor's house, and as they were all anxious to see the new set, Doctor Dale showed it to them almost immediately after their arrival.

"You see, boys, this set uses the old reliable galena crystal for detection," he pointed out. "Not so very long ago people all turned up their noses at the humble crystal detector, but now it is

being used more and more—with modifications, of course."

"Yes, but that's partly due to the fact that you can get such good artificial crystals now, isn't it?" asked Bob.

"That has a lot to do with it," replied the doctor. "The natural crystal was nowhere as good as the manufactured variety."

"Why is that?" inquired Jimmy.

"Well, you see, galena is really a natural crystalline sulphide of lead. In some mineral veins it is found in perfect cubes. As a rule, though, it occurs in big chunks, and most of the natural crystals are just little bits chipped off. The natural galena crystals, as you boys know, are fine if you can strike a sensitive spot, but sometimes such a spot is rather hard to find. Now, with the artificial crystal almost any spot on it will give a fair result."

"I read somewhere that that was due to so many of the impurities having been eliminated from the artificial galena," observed Bob.

"Yes, that's it," assented the doctor. "The easiest way to get a good crystal is to melt the natural crystals, and then let them solidify again. Galena melts at about one thousand degrees Fahrenheit, and the melting process seems to get rid of most of the impurities. Some time we can

make the experiment, if we all feel inclined that way."

"That would suit me first rate, for one," asserted Joe. "I've found out that if you want to get a good article, the best thing to do is to make it yourself, if you can."

"Wouldn't it be a bit hard for us to heat anything up to a thousand degrees?" asked Herb.

"Not a bit of it!" exclaimed Doctor Dale. "Why, the coal fire in a kitchen range will heat up to that temperature easily, or we could reach it over a good gas flame. The main difficulty is, not to heat the galena sufficiently, but to cool it off properly. If it cools too fast, the galena in the crucible will be made up of very small grains with only a few sensitive surfaces."

"How could you tell when you had reached the proper heat?" asked Jimmy. "I should think it would take a pretty good thermometer to register that high."

"It would take a better one than I have ever seen," replied Doctor Dale, with a smile. "As it happens, however, it would not be necessary to depend on any heat-measuring device. The color of the crucible would be an accurate enough guide for our purposes."

"How is that?" put in Herb, deeply interested.

"When it showed a dull red," was the answer,

"you could safely estimate a heat of about seven hundred degrees, and at one thousand degrees it will be somewhere between a bright red and a deep orange color. When it gets to this point it should be kept there for about an hour, after which you can begin a very slow cooling process."

"Wouldn't that be hard to do?" asked Joe.

"The best way, if your crucible is in a coal fire, is simply to let the fire go out; but if you are using a gas flame, you can turn it down very gradually and get the desired result just the same," was the reply.

"Let's try it to-night!" exclaimed Herb, with his usual impulsiveness.

"I'm afraid we are not equipped for the experiment this evening," returned the doctor. "If you would really like to try it, however, I'll have the necessary apparatus here the next time you boys come to see me."

"That will be fine," remarked Bob. "We'll not only make an interesting experiment, but if it turns out all right, we'll have some fine crystals on hand."

"I know it's pretty hard to buy good ones lately," agreed Herb.

"Sometimes I have to fuss around a long time before I can find a sensitive spot," added Joe.

"It's no fun, either, when you're in a hurry

to listen in on a good concert," put in Jimmy, plaintively.

"All right, then, we'll consider that settled," said the doctor. "But we don't want to spend all the evening talking, even if it is interesting talk. Let's see what we can pick up on my new set," and he switched on the batteries and started manipulating the knobs, while the Radio Boys waited eagerly for the first sounds to issue from the loud-speaker.

CHAPTER VII

THRASHING THE BULLIES

DOCTOR DALE manipulated the knobs for a few seconds, and suddenly they all heard the announcer from WEAF speaking.

"The next number on our program will be a violin solo," announced the sonorous voice, and the Radio Boys leaned back, prepared to hear something good.

But they were disappointed. Before a single note could come floating in through the horn, the slight sibilant sound of the apparatus ceased abruptly. The set had suddenly "gone dead," and, try as he might, the doctor could not coax a sound from it.

"That's very strange," he said, after trying in vain to get some result. "Suppose you try it, Bob. Maybe you'll have better fortune."

Bob was no more successful than the pastor had been, and after a few minutes he looked at Doctor Dale with a puzzled frown between his eyes.

"That's one of the queerest things I ever knew

to happen to a radio set," he said. "I guess we'd better go over the connections, and make sure that everything is tight."

This they did, but everything seemed to be in perfect order. All the connections were neatly soldered in place, and it was easy to see that the trouble did not lie here.

"Well," said Bob, at last, "it seems plain enough that the set itself is all right, unless one of the transformers has burned out. That's so unlikely, though, that I think we'd better take a look at the antenna. Perhaps the trouble is in that or in the leading-in wire."

"That's easy to find out," remarked Joe, and they all went outdoors and around to the back of the house. Doctor Dale had a powerful little electric flashlight, and by the aid of this they could see that the antenna wire was all right. Having made sure of this, Doctor Dale turned the brilliant little shaft of light on the house, and followed the course of the leading-in wire down the wall. This wire entered the house through one of the dining-room window frames, and as the light neared this point, the doctor uttered an exclamation.

"There's our trouble!" he cried. "The wire is broken just outside the window. I wonder what made it do that."

"It does seem rather queer," said Bob. "It

looks to be a pretty heavy wire, and there's no strain on it at that point."

"Yes, but it's always the unexpected thing that happens, especially in radio," remarked Joe. "Probably a couple of us could hang on that wire and it wouldn't break, and yet it snaps with nothing but it's own weight to hold up. Let's splice it and give the set another try-out."

They were about to follow Joe's advice, when suddenly Bob's keen ears caught the sound of a suppressed laugh coming from the direction of Doctor Dale's garage. Not only that, but he thought he recognized the voice, and suddenly the cause of the wire's mysterious failure flashed over him. He had recognized the sound of Carl Lutz's voice in the laugh, and a wave of hot anger surged up in him. His first impulse was to make a dash for the garage, but suddenly he thought of a better plan, and by an effort pretended that he had heard nothing.

"Come on into the house and get some tools," he said, in his usual tone of voice. "It won't take a minute to twist the ends together and put a drop or two of solder over the splice. We'll have it fixed up for you, Doctor Dale, inside of five minutes."

They all went into the house, and Doctor Dale went upstairs to get a couple of pairs of pliers

and some tape. While he was gone, Bob swiftly outlined his plan to his friends.

"That wire was deliberately cut by Buck, or possibly Carl Lutz," he said. "I heard Carl's mean laugh while we were outside. I was nearest to the garage, and I suppose that's why I was the only one to hear it. Now, it's pretty dark tonight, and we don't want that pair to get away scot free if we can help it. My idea is to go out the front door, which they can't see from where they are hiding, and then spread out and surround the garage. We ought to catch one of them, anyway, and then it will be up to us to teach him not to cut leading-in wires. How does that plan strike you?"

"It sounds fine," ejaculated Joe. "Up and at 'em, fellows. The sooner we start, the better I'll like it. There's a possibility they may have gone even by this time," and at the thought his face fell.

"No danger of that," Bob reassured him. "They'll hang around for the fun of watching us mending the wire. They'd enjoy that so much that they're sure to wait."

Knowing Looker and his friend as they did, the Radio Boys thought this highly probable, and without further words they proceeded to put Bob's plan into effect. As silently as Indians they

stole out of the house and approached the garage. This was quite a large building, and was surrounded by shrubbery, so that it made an ideal hiding place.

Everything was so quiet that the boys began to fear that Carl and Buck had taken the alarm and gone away, when suddenly the stillness was broken by a startled exclamation, followed by a crash of some heavy body falling.

What had happened was that Jimmy, while feeling his way along in the pitch darkness, had inadvertently tripped over some projecting object, which proved to be Buck Looker's leg. The exclamation was uttered by Buck, and the crash was the result of Jimmy's falling through an evergreen plant and landing against the wall of the garage.

Immediately all was uproar and confusion. At the first alarm, Buck and Carl had jumped to their feet and started as fast as their legs could carry them toward the street. Unluckily for them, both Bob and Joe were converging on the garage from that direction, and Buck and his friend ran squarely into their arms. By this time they were so near the street that the light from an arc lamp illuminated the scene, and by its aid Bob and Joe proceeded to administer summary justice on the meddlesome youths. The latter did not want to fight, but when they saw that there was

no escape, they put up a defense that was not to be despised. They were both big fellows, but Bob and Joe were so indignant and furious over this last uncalled for outrage that the two bullies would have had little chance in any event.

Nevertheless, for a few minutes the fight was fast and furious. Just at its height Joe slipped on the wet grass, and while he was down both Buck and Carl concentrated on Bob. Only for a moment, however, and then Herb, who had come running up by this time, stepped in and sent Carl reeling back under a fusillade of blows, while Bob pressed Buck hard, driving him back toward the garage. It would have gone hard with Buck and his friend had not Doctor Dale appeared on the scene just then. He was hatless and greatly alarmed at the uproar in his usually peaceful garden.

At sight of him, the Radio Boys paused for a moment, and Buck and Carl took advantage of this momentary respite to make a dash for the street. Herb and Joe, who was now on his feet again, started in pursuit, but Bob called them back.

"We've given them something to remember us by, fellows," he said. "Besides, I think we owe some explanation to Doctor Dale. He must think we've gone crazy."

"I must admit that it looks somewhat that

way," the doctor said. "Who were those two fellows that I saw running away just now? Were they burglars?"

"No, sir. Those were the fellows that cut your leading-in wire," said Bob, quietly.

"Cut it!" exclaimed the doctor, in amazement. "Who would want to do such a thing as that?"

"They weren't doing it to you, sir; that is, not directly," explained Bob. "They wanted to make us trouble. They must have seen us go into your house, and they thought that would be a fine trick to play."

"Then they were your old friends, Buck Looker and Carl Lutz?"

"Yes, sir. But I don't think they'll try it again very soon," answered Bob.

"We taught them a lesson that they'll be likely to remember for a while," added Herb.

"Well," said Doctor Dale, "as a rule I don't believe in fighting, but I am a believer in swift justice, so I won't lecture you boys. If you hadn't administered punishment in your own way, I might have taken some other steps. As it is, I imagine it will be wiser just to let the matter drop. Was Jimmy in the battle, too?"

"Not very much, I wasn't," said that lad, who had been ruefully rubbing various portions of his anatomy. "I was too busy picking myself out of the remains of an evergreen tree to do any fight-

ing. I pretty nearly knocked a hole in the side of your garage with my head, Doctor Dale."

"It sounded like a young earthquake," grinned Joe. "It was just luck that you didn't scare them away, Doughnuts. Next time, see that you leave the garage and the shrubbery alone, so that the fighting men won't be deprived of your help."

"Huh," sniffed the fat boy. "It took me to find them, didn't it? Probably you'd be looking for them yet, if it hadn't been for me."

"Well, however that might have been, I think you boys had better come into the house and repair some of the damage to your clothes," said Doctor Dale, with a twinkle in his eyes. "I'm expecting a friend to visit me this evening, who may have an interesting proposition to put up to you. You'd better hurry, too, as he is likely to be here at any moment now."

"What is the proposition?" asked Joe, as they turned toward the house.

"I'm not going to tell you now, but I don't mind saying that it has something to do with an automobile tour. Does that interest you?" and he smiled as he looked from one eager face to the other.

CHAPTER VIII

A CRASH IN THE DARKNESS

"DOES it interest us?" repeated Bob. "I should say it did!"

"Automobile is my middle name," remarked Joe.

"Just when we were wondering what we could do with the rest of our vacation!" exclaimed Jimmy, jubilantly.

"Comes right in the nick of time," affirmed Herb.

The boys bombarded Doctor Dale with eager questions, but the doctor was adamant and reiterated his suggestion that they should remove the marks of battle. This was considerable of a task, after the furious scrimmage with Buck and Lutz; but they did it, and had repaired the damage to the lead-in wire and were back in the living room of the parsonage and starting to tune up the radio set again when the doorbell rang.

The doctor himself answered the summons,

and promptly ushered the newcomer into the room. No introductions were needed, for all the boys knew Mr. Strong well. He was a parishioner of Doctor Dale's, one of the leading men of the town and an especially close friend of Joe's father, who was his family physician.

"At the radio, I see," Mr. Strong remarked, with a genial smile, as he took the chair that the doctor drew out for him.

"Trying out a new set," said the doctor. "You're just in time to see how it works."

Mr. Strong himself was a radio enthusiast, and he shared with the boys the interest elicited by the very satisfactory way in which the set worked. Several selections from that evening's program were received with special sweetness and clearness which justified all the doctor's predictions.

The Radio Boys, however, paid less attention to it than they would otherwise have done, for their minds were full of the hint that the doctor had given to them about the prospective tour. For the moment, that was the real question of the evening and eclipsed everything else in importance.

Perhaps a little tinge of mischief caused their host to prolong the concert as he did, but at last he took pity on their impatience and broached the subject that was uppermost in their minds.

"I haven't forgotten the splendid fight you boys put up to save the property of the Old First Church in those forest fires on Spruce Mountain," he began, looking around on the eager group. "Ever since that time I've been casting around to see if I couldn't do something to cancel the debt."

"There's no debt at all," put in Bob. "We were only too glad to do what we did, and we never had any thought of payment."

"I know that perfectly well," replied the doctor. "But all the same, it saved the church property, and I am exceedingly grateful. Lots of boys in your predicament would have thought of nothing but saving their own skins.

"The other day, Mr. Strong was speaking to me of an automobile trip he was planning to the coast of Maine, partly for pleasure, but chiefly for business reasons. He has a big seven passenger car, and as he is a sociable soul"—here he smiled at the visitor, who waved his hand deprecatingly—"he said he hated the thought of taking the long trip alone. Immediately the thought of you boys came into my head, and I suggested that he take you along. He took to the idea at once and said that nothing would give him greater pleasure. So there you are, if you want to go."

The glad chorus of thanks and eager accept-

ance that broke from the group left no doubt on that score.

"Of course, we'll have to get the consent of our folks," said Bob. "But I've no doubt they'll be willing."

"That's all been attended to," replied the smiling doctor. "I've been to see every one of them in advance, so that there'd be nothing to mar the pleasure of the surprise."

"Doctor Dale!" exclaimed Bob impulsively, "you're a bri—" he was going to say a "brick," but thought this would hardly suit the doctor's dignity, and ended rather lamely "the real thing."

For the rest of the evening, radio had to take second place, while the whole party discussed routes, stopping places, and all the other things that go to make up a successful tour. Mr. Strong had his road book with him, and before the boys left Doctor Dale's house a tentative plan for the trip had been sketched out.

They were to start at dawn on the following Monday morning, and the interval was a busy one for the Radio Boys. Many things had to be bought and packed. But by Sunday evening everything was ready. It had been agreed that they should all go to Doctor Dale's house, where Mr. Strong would call for them with his machine.

Jimmy was the first one to arrive on Monday morning, and got Doctor Dale out of bed while it was still dark. The good-natured pastor did not mind, however, as he had expected to get up early to see them off. It was not long before the other boys arrived, and promptly at six o'clock Mr. Strong's machine swung around the corner. The boys said good-by to the doctor, climbed in, and the trip had begun.

It was a beautiful, clear morning, and as the sun rose and flooded the landscape with brilliant sunshine, the boys felt that life had little better than this to offer. Fine weather, a clear road, a good car—what more could any healthy boy desire?

As they left the town, Mr. Strong opened the throttle a bit, and the car picked up speed until it was purring along at a good clip. They had much distance to cover, and while Mr. Strong was no speed maniac, still he considered this a good road gait, and held it steadily, hour after hour.

The country through which they were passing was hilly and heavily wooded, and at every turn of the road some new and beautiful view lay spread out before them. The powerful car swept up every hill with an ease that delighted the boys, and on the down grade Mr. Strong

threw out the clutch and let the car coast. As the big machine swooped down into the valleys the sensation was that of flying, and the boys laughed and sang as the crisp air whistled past them. Mr. Strong was an expert driver, and the boys soon learned to have unbounded confidence in him.

After a while Mr. Strong resigned the wheel to Bob, who soon became familiar with the controls and piloted the big car with the skill and ease of a veteran. At first Mr. Strong watched him closely, but soon he decided that there was nothing to worry about, and settled back to rest and enjoy the country.

"It's a great relief to have somebody along that can handle the car," he remarked. "I thoroughly enjoy driving, but there are times when I feel like leaning back and looking at the scenery without having to watch the road. I don't know how much driving you've done, but you've got the knack of it, all right."

"Oh, I've driven Doctor Atwood's machine, among others," said Bob. "I could probably do a lot better if I got more practice, though."

"Well, experience never hurt anybody," said Mr. Strong. "After this trip, you'll be an old timer at the game. You can drive a lot, if you want to."

Needless to say, Bob did want to, and for the rest of the trip he and Joe drove fully half of the time.

The first night of the journey they stopped at a good hotel, and after a fine dinner they slept the sound sleep of tired travelers. The next morning they started at daybreak, with Shinneport, Maine, as their objective before nightfall.

This program called for some fast traveling, but both car and drivers were equal to the task, and after an exciting all-day flight through beautiful country, they reached their destination late in the afternoon. They had made the long trip from Clintonia without even a puncture, and the boys were enthusiastic in their praise of the car. Not even a shower had marred the perfection of the trip, and the boys felt that no one could make the journey in better style.

Mr. Strong had intended to stay in Maine only a few days, and then return to Clintonia. But the business that had drawn him there proved to be more complicated than he had supposed, and finally it began to look as though he could not leave within any reasonable time at all, which made it appear as though the Radio Boys would have to return by train. Quite unexpectedly, however, another and even more fascinating trip presented itself.

Mr. Strong found that business made it neces-

sary for him to go at once to Halifax. When this became a certainty, he offered to take the boys with him, provided they could get their parents' consent. Of course, they jumped at the chance, and for a few hours afterward kept the wires hot with telegrams to the home folks. Finally consent was gained, and it was a jubilant quartette that conveyed the news to Mr. Strong.

"That's fine, boys," said he, heartily. "I hated to think of the trip ending with a train ride home. I'll get the boat tickets, and we'll start for Halifax about noon to-morrow."

He took out his watch, which was without a chain, and in some way it slipped from his hand and fell to the floor. With a regretful exclamation, Bob jumped to pick it up.

Mr. Strong examined the watch ruefully, shook it and put it to his ear.

"Done for, I guess, until a jeweler repairs it," he remarked. "I hardly know how to do without one."

"Use mine," volunteered Bob, taking from his pocket the beautiful watch he had received on his last birthday.

"I don't want to rob you," said Mr. Strong, hesitating. But Bob insisted so strongly that he at last acquiesced.

"Didn't think you'd ever let that watch go out of your hands, Bob," said Joe, when they were

alone, for he knew how highly his chum prized it.

"I wouldn't ordinarily," replied Bob. "But Mr. Strong's been so kind to us that it's little enough to do for him. He'll need it only till he gets his own watch fixed."

"But he can't get that done at once."

"No; but what of that? It's all right. And Mr. Strong can have anything I have. If it were your watch, you'd feel the same."

"I suppose so," agreed Joe.

The next day the boys found themselves on board a steamer bound for the Canadian port. They could hardly believe in their good fortune, and Jimmy declared that he expected to wake up any moment and find it all a dream.

They made friends with the radio operator, which was not difficult when the latter found how keenly they were interested in the science. Each of them was allowed to receive one of the messages in international code, and they enjoyed the experience hugely.

All went well, and the Radio Boys were enjoying themselves thoroughly, until, along toward evening, the steamer ran into one of the heavy fogs common in those waters. The vessel was forced to proceed at reduced speed, and there was an air of suppressed anxiety among officers and crew.

Few among the passengers thought much of the matter, and those who did expected that the fog would lift soon. The boys went to their staterooms at the usual time without any thought of real peril in their minds.

But danger was abroad on the face of the waters.

It seemed to Bob that he had hardly fallen asleep when he was rudely awakened by a terrific crash that almost threw him out of his berth.

CHAPTER IX

A NIGHT OF UNCERTAINTY

Bob sprang to the floor. He was joined immediately by Joe, who shared the stateroom with him. As they hastily threw on a few articles of clothing, they could hear shouts and cries on deck and the rush and scurry of feet overhead and along the passageway outside. Dominating everything, however, was a sullen roar of water as it poured into the hold of the vessel.

"I guess the ship's been badly hit," said Joe, as they made for the door. "See how she's heeling over."

"Yes, we'd better try to locate the others and get on deck as quickly as possible," replied Bob.

In spite of the shock and the danger, they were both cool and ready to meet any emergency that might present itself.

Luckily, they met Herb and Jimmy and Mr. Strong in the passageway, and with very few words they hurried up on deck.

Everywhere there was tremendous excitement

and confusion. The heavy fog still hung thickly over everything, and through it they could see pale, terrified faces, with here and there an officer going swiftly about his business with jaw grimly set.

All this the boys saw at the first glance. In the confusion it seemed impossible to learn what had happened or how imminent was the danger. Bob, as usual, came forward with the first practical suggestion.

"Let's go up to the wireless room," he proposed. "They'll know what's happened, and we can get the information first hand."

"Good idea," said Mr. Strong, briefly, and without further discussion they made for the radio room. Progress was slow, as people were rushing aimlessly about in every direction, and they had many collisions before they finally reached the radio headquarters.

The boys' acquaintance with the operator now stood them in good stead, for otherwise they would not have been allowed to enter the cabin at all. But the operator only nodded briefly and went on with his business. His calm and collected actions were in striking contrast to the terror and confusion reigning without. For a while he was too busy with his instruments to answer questions, and the boys had more sense than to ask any. At length, however, Pearsall,

the wireless man, took the headset from his ears and turned to them.

"Well, what's the verdict?" asked Bob. "Are we bound straight for Davy Jones' locker, or have we got a chance of keeping afloat?"

"We don't really know yet just how serious the damage is," replied Pearsall. "We rammed a lumber schooner, and tore away a good part of our bow. The forward compartment of the hold is flooded, but the bulkhead seems to be holding, and if it does, I don't think we're in any immediate danger, provided a storm doesn't come up before we can get to the nearest port. We've sent out distress calls, just the same, and will probably get an answer soon. I rather imagine we'll pull through all right, but a good deal depends on that water-tight bulkhead. If that holds, all right, if not—well, all wrong, I guess," and he shrugged his shoulders.

"How about the ship that we collided with?" asked Mr. Strong. "That must be damaged worse than we are."

"She's pretty well stove in," answered the wireless man. "But the ship is loaded with lumber, so she can't very well sink. We'll probably stand by until daylight, anyway, and then it will be possible to see just how much damage has been done to both vessels."

"When the crash came, the first thought that

entered my head was that we must have hit an iceberg," said Herb. "I've heard so much lately about icebergs and the iceberg patrol that I naturally thought that was what had happened now."

"That might have been, easily enough," said Pearsall. "Up in this part of the world no ship is safe from that menace, even in mid-summer. In fact, the danger, in a sense, is greater then, because nobody is really expecting such a thing, and there aren't as many precautions taken as in the springtime. Just after the winter ice has broken up is a ticklish time to navigate in northern waters, I can tell you.

"The chances are," he continued, after a moment, "that we can make port without any outside assistance."

"Yes, but there is also a chance that we can't," Mr. Strong pointed out. "And that's a chance we can't afford to take. Safety first is a good motto anywhere, but it's especially good at sea."

The fact was, that Pearsall had been so long at sea and was so used to the dangers of a seafaring life that he perhaps underrated the peril of the situation in which they were now placed. The Radio Boys stayed with him a short while longer, and then returned to the deck.

The passengers had calmed down somewhat, under the reassuring reports of the officers,

though very few had returned to their staterooms, but remained huddled in little groups about the deck, trying vainly to pierce the enshrouding blanket of fog that curled and eddied about the ship. Many anxious glances were directed toward the lifeboats, which had been provisioned and were ready to be lowered if necessary. Two or three sailors, with an officer in charge, stood ready at the falls, and no precaution had been neglected should worst come to worst and the ship have to be abandoned.

"I don't want to be a calamity howler," said Joe to Bob, in a low voice, that could not be overheard by the other passengers. "But it seems to me that the ship is more down by the bow than it was when we first came on deck after the crash. Maybe my imagination is only playing tricks on me, though. How does it seem to you?"

"I don't think your imagination has anything to do with it," replied Bob, grimly. "The ship *is* further down at the bow. There's no doubt of it. If that wireless operator were down on deck here, he might not feel quite so confident."

"It can't be so long until daybreak now," said Joe. "If a boat arrives by then, we'll all be taken off, anyway."

"Even if one doesn't get here in time," returned Jimmy, "we can take to the small boats.

The water is calm enough, and we'll have all the sensations of shipwrecked mariners, except that we can be pretty sure we'll be picked up soon."

"I wish we knew just how matters stood," said Herb. "I vote that we do some scouting around and try to find out just what's what. If we could get down below decks I'll bet we'd find out pretty soon."

"That's not a bad idea, Herb," observed Bob. "Let's go, fellows, and see what we can dig up."

He led the way to the entrance to the succession of iron ladders that led down into the engine room. He knew that they would not be allowed to go down if they were seen by any of the ship's officers, but he thought they might get by unobserved in the general confusion.

There was an officer on guard at the door, but his back was turned toward the boys as he stood lighting a pipe, shielding the flame of the match from the wind. They slipped noiselessly through the door, and were soon descending the steep iron ladders that led down into the engine room. Soon they came to the last platform above the engine room deck, and, peering through the grating, could plainly see what was going on below them.

The floor of the engine room was under water, which swirled and splashed about the bases of the main engines. At one side of the room, three big

reciprocating water pumps were working at top speed, and the boys knew that they were pumping water out of the hold to the limit of their capacity. But the water was coming in faster than the big pumps could force it out. Even as the boys watched, a sluggish roll of the vessel sent the water swirling around the electric generator that supplied the ship's lights. The whirling flywheel sent a spray of water flying in all directions, and as some of it landed on the armature and brushes, the lights flickered and dimmed, almost going out.

As the water receded on the return roll, the lights went up again, but the boys realized that this could not last long. The water was steadily gaining, and before long the generator would be put out of commission, and the ship would be in darkness. They knew, too, that the water would eventually reach the fires under the boilers, quenching them and causing the steam to die down. Then the pumps would stop, and the water would gain rapidly, until the vessel finally became waterlogged and sank.

"We'd better get up on deck while we've got light to see by," whispered Bob. "I guess we've found out what we came down to find out and what we wanted to know, all right."

"Yes, come on," muttered Joe, a somber look in his eyes.

They climbed up on deck and rejoined Mr. Strong, to whom they related what they had discovered. When they had finished he said nothing, but looked with eager, straining eyes to the north.

"Oh, for the lights of a vessel!" he muttered finally.

CHAPTER X

SNATCHED FROM THE SEA

It would be foolish to think that the Radio Boys did not share in the general alarm. They knew that the vessel was badly damaged, and with almost every minute that passed they could detect that it was listing more heavily to port. They could hear the monotonous chug-chugging of the pumps as they worked desperately, and the sound was not reassuring.

The darkness added to the sense of imminent danger. By the time the boys reached the deck after leaving the engine room the electric lights were out, and although a few lanterns had been hastily lighted and strung about here and there, their beams were obstructed by the heavy fog and hardly did more than make the darkness visible. The figures that flitted in and out the feeble zone of light seemed like so many phantoms.

Then there was the fog, the dank, slimy, dripping fog, that hung around them like a winding

sheet and soon had them drenched to the skin, lightly and insufficiently clothed as they were. The situation was one that might have struck with apprehension, not to say terror, the most dauntless heart.

But after the boys had had time to get a grip on themselves they braced, and, without minimizing the danger which they knew existed, they kept their thoughts in their own hearts and put on a brave front.

"This is an adventure we didn't look for when we started on this trip," said Joe, trying to throw a touch of buoyancy into his tone.

"That's the way most of our adventures have come to us," remarked Jimmy. "Don't think I'm scared, fellows, because my teeth are chattering. That's mostly from the chill, though I'm willing to admit I'm scared a bit, too."

"Guess we all are," said Joe. "But there's no disgrace in being scared, as long as we fight the scare. What famous general was it, Bob, who admitted his knees always shook when he went into battle? But he went in just the same, and that's what made him a hero."

"I can hear the radio operator still sending out his signals," said Herb. "Guess he's flinging out the old S. O. S. as fast as his fingers can work."

"Let's go and see if he has any answers yet,"

suggested Bob. "We might as well be there as anywhere else."

As they made their way to the signal room again, they heard the creaking of a pulley at the side.

"Testing out the pulley to see if the boats can be lowered all right," observed Bob.

"Looks as thought they think the vessel is a goner," said Jimmy.

"Not necessarily," returned Bob, cheerily. "That's only a matter of precaution that any good captain would take. It's his business to get ready for the worst that can possibly happen."

The boys passed along, being careful to avoid interfering with the activities of the crew, until they again reached the door of the wireless room.

The operator, with his face pale but his jaw grim and determined, was intent on his work, and the blue flames sputtered as he worked the apparatus that was sending out urgent messages over that dark waste of waters.

The boys huddled at one side of the door and listened. All of them were now so expert that the letters of the code were as plain to them as the alphabet.

That the situation was about as grave as possible, could have been gathered by the expression of their faces as they interpreted the meaning of the signals.

The S. O. S. was frequent and insistent. Latitude and longitude of the vessel were given as nearly as the operator could determine them, and the more extended appeals that followed were of the most urgent character.

"Collided with a lumber schooner. Part of bow torn away. Water coming in rapidly. Pumps almost useless. Getting ready to take to the boats. Hurry! Hurry!"

Again and again, these and similar appeals were sent out into the night.

"Now we know how our people felt when their boat was sinking, that time we were at Ocean Point," murmured Bob, soberly.

"Let's hope an answer will come to us as it came to them," observed Joe, in a voice not too much surcharged with hope.

"It may come any minute," replied Bob, encouragingly. "Remember, we're not out in the middle of the ocean, but in a lane that's full of ships. Some of them will be sure to answer. Look, he's getting something now."

The boys watched the operator as he suddenly bent over his instrument intently. And their own faces shared his look of relief when they heard the message.

"United States naval vessel *Meteor,*" it ran. "Coming as fast as we dare to in this fog."

A moment later came a second message from

a merchant steamer that had caught the S. O. S. and was steaming to their assistance.

"What did I tell you?" cried Bob exultantly.

"That's bully!" exclaimed Jimmy. "I guess we're not going to kick the bucket yet."

"We're not born to be drowned, so we must be born to be hanged," put in Joe, with a return of his old gayety of manner.

"Let's hope that doesn't follow," laughed Bob. "But listen, fellows. There's another message."

Sure enough, it was another call, freighted with cheer and hope and promise of speedy help.

"There's luck in odd numbers!" exclaimed Herb. "That makes three, and from the locations they gave they can't be far away. One of them must be here soon. Hurrah, fellows! We'll be laughing over this thing to-morrow."

"They'll have to hurry though," said Jimmy. "This boat is going down mighty soon. Her engines must be stopped, for I don't hear them any longer."

The engines, which had been kept going just enough to make the steering of the vessel easier, had indeed ceased running. The fact was ominous, for it implied that the water had reached the engine room. And, moreover, the vessel had listed so heavily by this time that they had to cling to the nearest stanchion to maintain their footing at all.

"How is any vessel going to find us in this fog?" wondered Jimmy, a new cause for anxiety assailing him.

"There's the answer," replied Bob, as he pointed to the stern, where a great rocket with a rush and a roar sped upward to the sky.

Others followed, and, in addition, great flares were set alight in the upper works of the steamer. How far they would penetrate the fog was a problem, but their possibilities were cheering.

In addition to the lights, the powerful fog-horn of the vessel boomed out at intervals to help guide the rescuers groping about in fog and darkness.

And the hearts of the Radio Boys leaped with gladness when in one of those intervals they heard a muffled, answering blast that seemed to be not more than a mile or two away. Shortly afterward a second, and later on a third horn were sounded on the other side of the boat.

"They're coming!" cried Bob, buoyantly.

But the water was coming too, faster than the helping boats, and almost as soon as Bob's voice died away the word was passed along that all were to take to the boats. The captain had waited till he dared wait no longer.

Mr. Strong, during all this time, had been keeping in constant touch with the boys, but at the moment the order came had returned to his

cabin to get something that he had forgotten.

Before he returned the passengers had been herded into groups by the officers according to the capacities of the boats that were awaiting them. That to which the boys had been assigned already had its quota full, and when Mr. Strong came back he was compelled to join another boat's company, despite his request that his party might be kept together. But there was no argument possible at a moment like that. As the plan was for the boats to keep together until they were picked up, it did not seem, anyway, to be a matter of much importance.

One by one, the boats were filled, until all the passengers and crew had been accounted for except the captain and the wireless operator. They stayed on board, keeping the wireless and the foghorn going until the last minute possible. Then, when the convulsive movements of the doomed vessel told them the time had come, they got into the boats, which pulled away to a safe distance, where they lay with just enough movement of the oars to keep their heads to the waves.

They had been there for perhaps five minutes when there was a terrific roar as the boilers exploded and the ship went down. Though in no danger of being sucked down in the maelstrom, owing to the distance at which they lay, the boats

were tossed up and down like chips for several minutes before the tumult of the waters subsided.

To the lot of the Radio Boys had fallen one of the smaller boats, of which they and some members of the crew were the only occupants.

By this time, the night was resonant with sound. From three sides came the bellowing of foghorns, as the rescuing vessels felt their way through the fog mist. The sounds could not by any stretch of imagination be called melodious, but to the wave-tossed people in the little boats they were sweeter than any music they had ever heard.

"Talk about concert programs!" exclaimed Bob. "That beats them all!"

"The Metropolitan Opera Company never had anything on them," returned Jimmy, grinning.

The small boats had been provided with flares before they were launched, and one was kept burning all the time at the bow of each boat. But they were so close to the surface of the water that their illuminating power was feeble and limited to a very narrow zone.

"If only this fog would lift!" muttered Herb.

"Let's be thankful the sea doesn't lift," said Joe. "What chance would we have if a storm sprang up?"

"There goes a rocket!" cried Bob, as a blind-

ing flash of light clove the darkness. "And it came from some ship close at hand. There's the ship now," he fairly shouted, as a vague mass loomed up, not a hundred feet away.

They all joined in a loud shout that was evidently heard on the vessel, which was just creeping along, and they heard a command given that brought the purring engines to a sudden stop.

At the same moment, the glare of a searchlight was turned on the boat, and for a moment it almost blinded them.

"Ahoy there in the boat!" came a voice through a trumpet. "We see you. Row up to the stern and we'll take you on board."

There was no need of urging. The sailors bent to their oars, and, guided by the searchlight which flooded the water ahead of them with its radiance, rapidly reached the stern of the vessel.

There was a ladder there, and, aided by willing hands outstretched to them, the Radio Boys and the other occupants of the boat clambered to the deck.

An officer, clad in the uniform of a United States naval lieutenant, stood at the head of the ladder, and greeted them heartily as they came on board.

CHAPTER XI

AN UNEXPECTED MEETING

"Got to you in time!" the officer exclaimed, in tones of deep satisfaction. "Was beginning to wonder whether we could find you in this fog.

"Mr. Porter," he continued, turning to an ensign who stood near by, "take these people into the engine room and let them get thoroughly dried out. Then give them a good hot meal and see that they have comfortable sleeping quarters. The captain will have a talk with them in the morning."

The ensign saluted and led the way to the engine room. The boys followed, their hearts full of relief and elation. Now that the strain was over, they realized how cold and wet and hungry they were. But they were alive, and life was sweet—never so sweet as now when they thought of how near they had come to losing it.

"If only we were sure that Mr. Strong had been picked up, we'd have nothing left to ask for," observed Bob, anxiously.

"I guess with so many boats about, he's certainly been rescued," said Joe, with cheery optimism. "By the way, he has your watch."

"Sure enough," answered Bob. "But I was thinking only of him just then."

The engine room was crowded as they flocked in, but it was gloriously warm, and before long their clothes had been dried out and the boys themselves were glowing.

The ensign, who had left them to give orders to the cook, returned soon, but not too soon, for they were all as ravenous as wolves.

"What vessel is this?" asked Bob, as they followed the officer to the dining room, where a smoking and abundant meal had been placed on the table.

"The United States Government vessel *Meteor,*" was the reply. "You're guests of Uncle Sam."

"Is that so?" replied Bob, in surprise, not unmingled with delight that was fully shared by his companions. "Well, there isn't anybody on earth I'd rather be indebted to."

"I've often wanted to be on a Government vessel," said Joe. "But I never expected that my first introduction to one would take place under such circumstances."

"I hope we'll have plenty of time to look it over," put in Herb.

The young ensign smiled significantly.

"I shouldn't worry about that," he remarked. "You'll probably have more time to do that than perhaps you'll want, for we're bound on a rather long voyage."

The boys looked at each other with amazement in their eyes.

"But can't we be put off on some vessel that's bound inshore?" asked Bob.

"Possibly you can," was the reply. "But with this fog that's hanging heavy on the sea, it may be days before we can speak a vessel, and, in the meantime, we'll be getting farther and farther from shore."

"But you have a radio on board, haven't you?" asked Joe, as he and the others digested this information.

"Sure thing," replied the ensign. "All the navy vessels are equipped with that now. They'd about as soon think of going to sea without a crew as they would without wireless."

"Well, that's all right then," said Bob, with a sigh of relief. "As long as we can get in touch with our folks and let them know we're safe, I, for one, don't care how long we stay here. In fact, it will be a good deal of a lark."

The ensign, who was still young enough to be in sympathy with their viewpoint, smiled at their enthusiasm, and went off to attend to a

matter of duty, promising to return when they had finished their meal and show them their sleeping quarters.

What the boys did to the copious and appetizing meal set before them was, Joe said, "a sin and a shame." The sharp sea air had whetted their appetites, which were keen enough without that stimulus, and they made a clean sweep of the food, to the manifest satisfaction of the steward who waited on them and who was kept busy replenishing their plates and coffee cups. When they had finished, all their alarm and hardships had been forgotten, and they were thoroughly at peace with the world.

"Uncle Sam feeds his people well, if that meal was a sample," ejaculated Jimmy, who had already surreptitiously been compelled to undo two buttons of his vest.

"I'll tell the world," agreed Herb, who, though he had not quite kept pace with Jimmy, had come in a close second.

"A life on the bounding wave has a good deal to recommend it," affirmed Bob.

"Yes, if the bounding wave isn't too close," modified Joe. "I was altogether too near it when we were tossing about in that small boat just before we were picked up. I know now how it must feel to be a castaway."

"With lots of sharks nosing around and try-

ing to upset the boat," Jimmy added to the picture.

"Too cold up here for sharks, I guess," observed Bob. "But even without those little playfellows swimming about, it's bad enough. It's mighty good to feel these solid planks under your feet."

"You boys feeling any better now?" asked Ensign Porter, entering the cabin.

"Better and fuller," answered Bob, with a laugh. "You see what we've done to the table."

"I see you've done your full duty," was the answer. "Now, I suppose, the next thing is bed. I've had a cabin prepared for you young fellows, with four bunks, so that you can be together."

He sent the steward off with the rescued members of the crew to the sailor's quarters, and then led the Radio Boys to a comfortable cabin, which, while not very large, was sufficiently so for all their needs.

"The captain will see you in the morning," Mr. Porter said, as he bade them good-night. "You can come then to some definite understanding about the immediate future."

It did not take the boys long to undress and slip into their bunks. In the excitement of the last few hours, it had seemed to them as though they would never want to sleep again. But now

nature asserted her rights, and they realized that they were enormously weary.

Luckily, in the time that had elapsed between the first alarm and the sinking of the steamer, they had been able to rescue the suit cases and other belongings from their cabin, and it was some satisfaction as they laid out their clothes to know that they would not have to appear before the captain the next morning in the wrinkled and disreputable raiment in which they had come on board.

"I wish I'd thought to ask the ensign just where this vessel was bound," remarked Joe, as he finished undressing.

"Plenty of time to find out about that in the morning," replied Bob, with a yawn that threatened to dislocate his jaw. "For the present, all that little Bobby wants is to hit the hay."

The steady throb of the engines provided a lullaby, and, despite the strangeness of their surroundings, in a few minutes they were all sleeping the sleep of utter exhaustion.

A knock on the door by the steward in the morning that had to be several times repeated awoke them. They stretched and looked around them confusedly before they could realize where they were.

"Breakfast ready in half an hour," called the steward, and went on his way.

Bob reached for his watch, and then sighed as he remembered.

They dressed with some care for their expected meeting with the captain. All were possessed with a sense of keen elation. Here indeed was an adventure they had never looked for, and one that promised to have in it endless possibilities. Overnight they had entered into a new world.

Through the porthole of the cabin the sun shone brightly, but with a frosty gleam, and there was a certain nip in the air as they made their way to the breakfast cabin that set the blood tingling in their veins and made a cup of coffee seem the finest thing in the world.

The tossing of the boat had not in the slightest degree affected their appetites. While they had not been on long ocean voyages, they had had a good deal of experience on the sea off Ocean Point, and were good sailors so no pangs of coming seasickness cast their shadows before, and they ate a meal that would have done credit to the most grizzled seaman that had ever sailed with the decks awash in the "roaring forties."

They had rather expected to meet the captain at the breakfast table, but learned from the steward that he and the other chief officers of the ship had their own mess. The companions of the boys at the table that morning were the petty officers of the ship and the radio operators. In

the main they were a genial, interesting lot of men, full of quips and jokes, and the boys were soon on friendly terms with them.

Following the meal they went up on deck. The vessel was cutting through the waves at a rattling rate of speed, dashing the water from her bows in great sprays of foam. She was a staunch boat with long speedy lines, her decks as white as snow and every bit of brasswork shining until one could see his face reflected in it. Even if they had not been told, the boys would have known instinctively that such a smart spotless craft could belong only to the navy.

The air was bracing, and the Radio Boys drank it in big draughts. The fog had vanished. The light of the sun was reflected from the tips of waves in a thousand points that glittered like diamonds. There was no land to be seen anywhere. As far as any evidence to the contrary appeared, they might be in the very center of the ocean.

They were enjoying the unusual sight to the full when the young ensign came along. He smiled pleasantly, as he saw them at the rail.

"The captain's ready to see you now," he said. "Come this way."

They followed him with a slight feeling of trepidation.

"Some old ogre, I suppose," whispered Jimmy

to Bob. "A martinet ready to snap your head off."

"Not so bad as that, I guess," replied Bob. "Probably a very decent fellow. Brace up, old boy."

The ensign knocked at the door of a commodious cabin. A voice bade them come in. They entered.

A man in captain's uniform sat at a table poring over a chart. He looked up.

Something like an electric shock went through the Radio Boys.

The man was Captain Amos Springer!

CHAPTER XII

BOUND FOR THE OCEAN LANES

THE captain recognized the Radio Boys at once, and he sprang quickly to his feet, his face quite as full of surprise and delight at the unexpected meeting as their own.

"Upon my word!" he ejaculated, as he shook hands with them warmly one after the other. "This is a bit of good luck I never dreamed of! I had been hoping to meet you again, but I had no idea our meeting would come about in any such way as this. So you are the four boys that our boat picked up last night! Sit right down and tell me all about it."

The ensign had saluted and vanished, much impressed by the warmth of the reception that had been extended to the castaways by the captain.

The boys seated themselves, still somewhat in a daze, but glad beyond measure that fate had thrown them into the hands of so staunch a friend. In a few words, Bob, acting as spokes-

man for the group, narrated the particulars of the collision and the sinking of their steamer.

"And you'll never know, Captain, how good it was to see that searchlight of yours shining through the fog on our little boat," he said, in conclusion. "What with the wet, the cold, and the worry, we were about all in."

"I don't wonder," replied the captain, sympathetically. "You were in a plight calculated to tax the strength and courage of experienced sailors. If a storm had come up, it would have been a matter of touch and go, and you might not have been rescued at all. I'm mighty glad that our vessel was in range of your S. O. S."

"You can't be any more glad than we are," responded Joe. "We'd rather find ourselves on your boat than on any other in the world."

"Even if it is carrying you farther and farther from your friends and home with every hour that passes?" asked the captain, with a smile.

"Even so," came from Bob. "Because they know, or will know soon, that everybody on board was rescued, and that will relieve their worry."

A troubled look came into the captain's face.

"I'm not so sure about everybody," he said slowly. "I was, last night, or of course we would have stayed in the vicinity. But there was some mix-up in the reports. We were told at first

that six boats had left the steamer, and when we learned that, counting your party, six boatloads had been picked up, we concluded that our work was done. But a wireless that reached me a little while ago says that there were seven boats, and the seventh had not yet been accounted for."

A look of consternation came into the faces of the boys.

"I wonder if Mr. Strong could have been in the missing boat," said Bob, in a voice that shook a little.

"It is possible, of course," replied the captain. "The names of the rescued have not been checked up fully yet. I have radioed to Washington, offering to return to the scene of the collision, but I have been told that other Government vessels in the vicinity will keep up the search. Likely enough, your friend is among the rescued. I'll let you know as soon as I have anything definite to tell. Of course, I'll report your safety right away, and the news will be sent to your people immediately. That will relieve their anxiety. Later I'll see that you have all facilities for sending your own personal messages."

"Thanks, very much," replied Bob. "We'd like to do that as soon as possible."

"And after that?" pursued Captain Springer, inquiringly.

"After that," answered Bob, "we'll do exactly as you say."

"I suppose I can soon speak some steamer homeward bound and put you on board," said the captain, half as though speaking to himself.

There was such a comical look of disappointment on the faces of the Radio Boys that the captain laughed aloud.

"Doesn't seem to appeal to you very much," he remarked, as he looked, with a twinkle in his eyes, at the various members of the group.

"Can't say that it does," replied Herb.

"You see, Captain," said Joe, "we never had a chance of this kind before, and we were beginning to feel as if we were in for a glorious adventure."

"And if so soon you're to be done for.
You wonder what you were begun for,"

said the captain, with a smile.

"That hits it exactly," confessed Jimmy.

"Of course, Captain," said Bob, "we don't want to presume on your kindness or tax your hospitality too much——"

"Don't worry about that," interrupted the captain. "I don't forget and I never shall that I owe my life to the courage and presence of

mind of you boys, and I'm only too glad to be able to repay, in what slight degree I may, the debt I owe you. I shall be delighted to have you stay on board the ship as my guests until our voyage is over and we return again to Halifax. That is, of course, if your folks consent."

"That will be dandy!" exclaimed Jimmy delightedly, and his feeling was mirrored on the faces of his companions.

"We'll get in touch with our fathers and mothers as soon as we may, and I'm sure they'll consent," added Bob.

"I don't see why they shouldn't," put in Joe. "It's vacation time anyway, so that it won't interfere with our school work."

"At what time does your school term begin?" asked the captain.

"In about six weeks," answered Herb.

"That will be just about the term of our voyage," observed Captain Springer. "At the end of that time, we'll be relieved by another vessel, and return to Halifax for fuel and supplies. So that just fits in nicely. By the way, do you boys know just where we are bound and what line of work this vessel is doing?"

"No one has told us," replied Bob. "But remembering what you told us the last time you were at my home, I suppose your work is in the iceberg patrol."

"Just that," agreed the captain. "I was appointed to the command of this vessel shortly after I left Clintonia, and I assumed my duties at once."

"The iceberg patrol!" exclaimed Joe, jubilantly. "Don't you remember, fellows, how we were wishing, after the captain left Clintonia, that we could have a fling at that?"

"And how it seemed as though we might almost as well wish for the moon!" chimed in Jimmy.

"And here we are right in the thick of it. I hope I don't wake up," cried Herb.

"You're not dreaming," the captain assured them with a smile. "But don't think for a moment that it's going to be all peaches and cream. We're not on a holiday jaunt, but on the hardest kind of service that has a good deal of danger attached to it."

"We wouldn't give a fig for it if it hadn't," asserted Bob, stoutly.

"Spoken as I like to hear things spoken," declared the captain. "Well, then, we'll consider it settled, always supposing that your parents consent."

"We don't want to loaf," said Bob. "We'll be only too glad to do anything you have for us to do. We don't know much about boats, but we're willing to learn."

"Well," said the captain contemplatively, "I don't want to put my guests to work, and we're not at all shorthanded. But I understand and appreciate your spirit, and I'll see that you have something to occupy your hands and mind. I shouldn't wonder if you could help out our radio operators once in a while, if you like. You boys are all radio fans, and it would be right in your line."

"Suits us right down to the ground!" exclaimed Bob enthusiastically.

"We'll just eat that up," declared Joe.

"Lead us to it," urged Jimmy.

"Hits us where we live," affirmed Herb.

"All in good time," rejoined the captain, rising. "Now come out with me on deck and I'll introduce you to my officers. They're a fine lot of men. You've already met Ensign Porter, but I want you to meet the others."

They followed the captain to where the first officer was standing.

"Lieutenant Milton," said the captain, "I want you to meet these young men that we brought aboard from the small boat last night. I didn't know until a short time ago that they were the same who saved my life some time ago."

"When you were caught in that overturned auto?" asked the lieutenant, with quickened interest, as he acknowledged the introduction.

"The same," replied the captain. "And boys don't come any finer! They'll go with us on this trip, and they're to have the run of the ship."

They talked for a few moments and were about to pass on, when the young ensign, Porter, came up hurriedly and saluted.

"Vessel lying to leeward, Captain," he said, as he handed over a pair of glasses. "Low in the water and seems to be abandoned."

The captain seized the glasses and focused them on what seemed to the boys a little speck, scarcely visible in the distance.

CHAPTER XIII

THE DERELICT

THE inspection of the distant craft by Captain Springer was long and attentive, and the boys watched him breathlessly.

"Looks to me as though she were abandoned," he said, at last, lowering the glasses. "No sign of life about her, and she's wallowing in the trough of the sea. See what you make of her, Lieutenant."

The first officer subjected the vessel to as keen and long-continued an examination as had his superior.

"If there are people on her, they're either sick or dead," was his conclusion. "From her build, I should take her to be a British ship. Tramp steamer, like enough, plying between Halifax and one of the British ports. There's no signal of distress flying. Probably the crew have left her."

The captain and lieutenant consulted for a few minutes, and then some orders were given, and the *Meteor* changed her course and made straight toward the vessel.

The Radio Boys stayed where they were, their eyes glued on the distant speck that soon revealed itself to their unaided eyes as a steamer, which they judged was about three hundred feet in length. Here, at the very outset of their cruise, was a mystery, and they were eager to be in at its unfolding.

As the *Meteor* drew nearer, the boys' eyes scanned the vessel from stem to stern, looking for some sign of life.

"Doesn't seem to be a soul on board," remarked Joe.

"I'm not so sure of that," replied Bob, whose eyes were the keenest of any of the party. "Seems to me I saw a head pop up over the rail toward the stern just now. There it is again. By ginger, it's a dog!"

They followed the direction of his pointing finger, but could see nothing.

"Guess you're dreaming," said Herb, skeptically.

"No, I'm not," asserted Bob, emphatically. "There! I caught a glimpse of it again. It's some poor brute that they had no room for in the boats, and so they had to leave him behind."

"Well, we'll know in a few minutes whether you're right," said Joe, "for the boat's slowing up now and probably they'll send over a party

to find out all about it. Gee, how I wish we could go with them!"

Captain Springer happened to be passing just then, and heard the remark.

"I guess that can be arranged," he said. "You boys can pack yourselves in small in the stern of the boat I'm going to send over."

"That will be fine!" Bob answered for them. "Thank you, oh, very much!"

The *Meteor* slowed up when she was a few hundred feet away from the helpless vessel, keeping up just enough steam to give her steerageway, and a boat, manned by Lieutenant Milton and a crew of six, and into which the Radio Boys also went in accordance with the captain's permission, was let down into the water.

The sailors bent to the oars and the little boat sped swiftly across the dancing waters.

As they approached, the conviction grew upon them that the ship had no human occupants. A stillness as of death hung over it. No steam came from the engine pipes, no smoke from the funnels. Some of the rusty plates had parted, and there was a gaping hole near the bow, through which the water rushed when the vessel rolled to that side.

"Maybe it's the Flying Dutchman," cried Jimmy, with a little catch in his voice and, for the moment, half believing the old legend.

"Or a vessel on which they've had the plague," was Herb's cheerful suggestion.

"Not much likelihood of that," said Joe. "That hole looks as though she's been in a collision. But we'll know all about it in a few minutes more."

The sailors rowed toward the stern, looking for a good place to board. They found a ladder near the rail and fastened the boat by a rope to the lower rung.

Lieutenant Milton had just set his foot on the ladder to ascend when there came a sharp bark from above, and a black, shaggy head showed itself over the rail.

"Didn't I tell you there was a dog on board?" demanded Bob.

"You win," conceded Joe. "And I'll bet, from the way he barks, he's glad to see us."

Two sailors were left in the boat to fend it off from the sides of the vessel, and the rest of the crew followed the lieutenant on deck. The boys were close on their heels.

A scene of indescribable confusion met their eyes as they looked around them. The deck was littered with ropes and parts of the smashed upper works of the vessel, due either to storm or collision.

The lieutenant, calling on his men to follow him, made a tour of inspection of the vessel,

searching the decks, the cabins, and the hold. As they had surmised, there was no man on board. The cabins were strewn with clothing and personal belongings that the owners evidently had had no time to take with them. On the tables in the officers' dining-room and the forecastle were the remnants of a half-eaten meal. In the cook's galley, pans on the stove still had meat and eggs in them that had been burned to a crisp. Everything pointed to the fact that the vessel had been abandoned in a hurry. Perhaps at that very moment the crew were tossing about in small boats on the ocean wastes.

But the attention of the boys was taken up for the moment by a big dog that came bounding up to them with joyful staccato barks of welcome. The poor creature was so glad of human companionship that it seemed as though he would go out of his senses.

"Poor brute," said Bob, as he caressed the shaggy head. "I wish we had something to give him to eat. He must be nearly starved."

"More lonely and terrified than starved, I imagine," said Joe. "He's probably been foraging around about among the tables.

"I've got a little something here," said Jimmy, a little sheepishly, as he drew a bacon sandwich from his pocket.

"Caught with the goods!" exclaimed Joe. "Where did you get this, you human cormorant?"

"Brought it from the table this morning," confessed Jimmy. "You see, I didn't know just what effect this sea air would have on my appetite, and I thought I'd better be prepared in advance. But I guess the dog needs it more than I do, and he's welcome to it."

Jimmy tossed the sandwich to the dog, who swallowed it in two gulps and wagged his tail for more.

"Got any other concealed about you?" asked Herb.

"That's all," declared Jimmy, mournfully. "Gee, I wish I could eat as fast as that fellow can. He's got me beaten to a frazzle."

The dog followed the boys like their shadows, as they moved about the vessel in the wake of the lieutenant and the crew.

"Guess he's adopted us," said Herb.

"Adopted Jimmy, you mean," corrected Joe. "See how close he keeps to his heels. He thinks Jimmy is the best thing that ever happened."

"And who shall say he's wrong?" said Jimmy, throwing out his chest. "I've often heard that dogs have more sense than human beings. They surely have than some human beings I could mention," and he looked significantly at his mates.

They picked up a life preserver that had on it the words *"Thomas Wilson,* St. Johns, Newfoundland."

"That's the name of the vessel and the port she hails from, I suppose," said Bob.

"She'll never see that port again, I imagine," remarked Joe. "I guess she's ticketed for Davy Jones."

In about an hour, the lieutenant had learned all that was possible about the vessel and prepared to return to the *Meteor.*

"I beg your pardon, Lieutenant," ventured Jimmy. "How about this dog?"

The officer looked at him a little quizzically.

"Well, what about him?" he countered.

"I—I don't exactly like the idea of leaving him behind," said Jimmy, a little confusedly.

The lieutenant looked half-amused and half-perplexed.

"We haven't any accommodations for dogs aboard the *Meteor,"* he said. "Still, I'll stretch a point and take him over to the vessel and let the captain decide."

The Radio Boys, delighted with that much gained, took advantage of the permission, and together they lugged the dog, which they had agreed to call Hector, down into the stern of the boat, which, propelled by lusty arms, soon reached the side of the *Meteor* and was lifted on board.

Captain Springer was standing at the rail, and to him the lieutenant made his report.

"She's past saving," he declared. "She lies too low in the water to be towed into port, and she'd go to pieces, anyway, before she got there. It's only because she has a cargo of lumber that she's kept afloat as long as she has. As it is, she's breaking up fast. She's an old boat and her timbers are rotten, while her engines are a mass of junk. It's a wonder the old tub has been able to keep afloat until now. When she'll finally go under though, I can't say. It may be a day, and it may be a week. Depends a good deal on the weather. But while she's above the water she's a menace to shipping. A vessel that plowed into her at night wouldn't have a Chinaman's chance."

"Your recommendation, then, from what you've seen?" said the captain inquiringly.

"Would be to blow her up," replied the lieutenant, promptly.

CHAPTER XIV

BLOWN TO BITS

CAPTAIN SPRINGER pondered the matter carefully.

"We'll stand by for a little while," he concluded, as he turned toward the wireless room. "I'll get in communication by radio with the Department in Washington and send them the substance of your report. They can then decide what they want us to do. And while we're waiting for their reply, we'll get in touch with other ships and the nearest shore stations, and find out if there's any news of the crew. If they've been picked up, well and good. If nothing has been heard of them, we'll cruise about in these waters and try to find them."

He was moving away, when he stopped short as he caught sight of Hector.

"Where did you get this?" he asked, with a puzzled look at his first officer.

"It was on the ship," the lieutenant answered. "These boys were so anxious to bring him along

that I consented, leaving the final decision to you. Of course, if you say so, a bullet will soon settle the matter."

"Oh, don't do that, please!" exclaimed Bob, and then stopped short, flushing at his temerity.

The captain looked from one to the other of the anxious group, and his eyes twinkled.

"I guess we won't have to resort to such drastic measures," he said, and the boys' hearts took an upward bound. "But you boys will have to take the responsibility of caring for him and seeing that he doesn't become a nuisance."

"We'll do that," promised Jimmy, and they all nodded their heads in emphatic assent.

"We'll take such care of him that you won't know he's on the ship," added Bob.

"All right," said the captain, and passed on.

"Didn't you go almost too far, Bob?" suggested Joe. "We can't take the bark out of the dog."

"No," returned Bob, "but we can make him so happy and contented that he won't be any trouble. We'll feed him well, for one thing."

"But not too well," put in Herb, "or we'll soon have him as fat as Jimmy. I don't know how strong the *Meteor* is, but there's been a pretty heavy strain on her since Jimmy came on board, and if Hector gets as big, the boat may founder."

"What does Jimmy care for that?" chaffed

Joe. "He couldn't sink if he tried to. He's a human life-preserver."

Jimmy cast upon them a look of biting scorn.

"I'd rather be comfortably plump than to be a string bean like you boobs," he came back at them.

"Angels of grace defend us!" ejaculated Joe. "Do you get that, fellows? Jimmy isn't fat. Perish the thought! He's just comfortably plump. Jimmy, I take off my hat to you. You're a past master in camouflaging the English language."

"Lay off Jimmy now, and let's get down to brass tacks," said Bob. "Don't let's forget that we've got to get in touch with the folks at home and get their permission to continue this trip."

"Needn't worry about that just now," put in the indolent Herb. "The wireless is going to be pretty busy for some time to come with the matter of this ship. I doubt if we can get our messages in for some hours yet."

"You ought to be a Mexican, with your eternal putting off of everything till the last possible moment," declared Joe.

"I don't know but what the Mexicans have it all over us at that," Herb defended himself. "Never do to-day what you can put off till to-morrow isn't half bad as a motto."

"Herb's like the fellow that always let his mail accumulate for three months at a time,"

observed Jimmy. "Then he tore all his letters up because it was too late to answer the important ones, and the unimportant ones didn't need to be answered anyway."

"Well, our messages home aren't going to wait a minute longer than they have to," declared Bob, with decision. "Though I suppose we'll have to wait until the captain gets through. What's bothering me is, just how we're going to get the messages through to them and get their answers."

"What's the matter with this idea?" suggested Joe. "Suppose we call up one of the big broadcasting stations near our homes—say WOR or WAAM at Newark, or WEAF at New York—and ask them to send telegrams to our folks, receive the answer from them, and then broadcast the answer to the *Meteor?* Of course, our people would meet any expense that might be involved."

Captain Springer, who was returning from the wireless room, heard the last remark and stopped.

"You needn't bother about that," he said. "I'll see that your radiograms go direct to NAA at Arlington, the big navy plant, and they'll get in touch by wire with your people and transmit to me the answers."

"That will be fine!" exclaimed Bob. "We didn't know that they'd attend to anything that wasn't strictly Government business."

"The need of castaway Americans is Government business," answered the captain. "If you were stranded in a foreign country, our consul, wherever you happened to be, would advance you money enough to get you home. Don't trouble your mind about it any further. In about an hour from now the radio operators will have had time to attend to this ship matter, and then you can send any messages that you like."

The captain rejoined his first officer at the rail, where he was gazing through his glasses at the derelict.

"We've learned that the crew of the vessel have been picked up and are safe and sound," he informed him. "The *Water Sprite* of Liverpool, bound for St. Johns, rescued them at an early hour two days ago. It seems that their vessel was caught in that heavy storm that was raging off the banks some nights ago and sprang a leak. They might have been able to carry on, however, had they not later been caught by a projecting spur of an iceberg which stove that hole in her that you mentioned in your report. Things got so bad it looked as though she might founder at any moment, and so the crew took to the boats. Luckily, the sea was smooth, and they were all right when the *Water Sprite* sighted them."

"Well, that's one responsibility off our minds, anyway," returned the lieutenant. "But what dis-

position are we to make of the abandoned vessel?"

"I haven't received definite instructions yet," the captain replied. "The Department is considering the matter, and I'll probably hear from them soon."

The awaited message came about an hour later.

"It's as I thought," remarked the captain, as he read the message that the wireless operator had translated from the code. "We're ordered to blow her up as a menace to navigation. She can't be salvaged, and she's sure death to any vessel that might run into her."

Orders were given at once in accordance with the instructions. The boys stood at the rail nearest the doomed vessel, taking care to keep out of the way of the crew, and watched with fascinated attention the busy preparations going forward.

Two boatloads of men were detailed to row over to the vessel with charges of explosives that were carefully planted at the most vulnerable points. Time fuses were attached, and then the boats returned, were hoisted to their davits, and the *Meteor* drew away to a safe distance, where she moved about slowly, waiting for the explosion to take place.

"It's almost like waiting to see a man hung," said Jimmy, in an awed whisper.

"Hardly as bad as that," replied Bob. "Luckily, boats can't feel."

"Think of the difference between this and her launching," murmured Joe. "Then, no doubt, there were flags and bunting and speeches and champagne broken over the bow and cheers from a big crowd when she slid off the ways. I wonder how they'd all have felt if they'd had second sight and could have seen the end of her."

"She'll have lots of company where she's going," put in Herb. "Gee, I suppose the ocean floor is just thick with wrecks. I don't suppose you could walk a hundred feet on the ocean floor without stumbling over something that once belonged to a ship."

"No doubt, at this moment there are more ships beneath the waves than above them," conjectured Bob. "But there she goes now!" he cried, as a great cloud of smoke rose from the vessel and a roar like that of thunder smote their ears.

The steamer seemed to rise in the middle like some great monster in a convulsion. The air was full of flying giant fragments. Great waves were stirred up that raced across the water and tossed the *Meteor* up and down as though it had been a chip.

For a few minutes, the cloud of smoke that hovered above the spot where the vessel had been,

obscured the sight of the spectators. Then, as this gradually drifted away, it became apparent that the *Meteor* had done its work well. The derelict had disappeared, and with it all the danger with which it had been fraught for vessels plowing the ocean lanes. It had been shivered into bits.

The *Meteor* got under way, and gradually the boys came back from the excitement of the event to the personal matters that required their attention. Their messages home were sent, according to the captain's suggestions, and before nightfall they had received answering messages from their fathers, full of thankfulness that the boys had been spared, replete with deep affection, and giving them the permission that they desired.

Now their minds were at rest and they could give themselves up wholly to the great adventure. Their spirits were at the highest pitch.

"Now we're off at last on the ice patrol!" exclaimed Bob jubilantly, as they were undressing for the night. "Bring on your icebergs!"

CHAPTER XV

CONSTERNATION

"WHERE away now, Bob?" asked Joe of his chum, as they rose from the breakfast table one morning several days later.

"To the radio room," was the answer.

"Might have known without asking," put in Jimmy. "Bob will be having a mattress moved in there before long."

The center of interest for the boys on board the *Meteor* was indeed the wireless cabin, where they were prime favorites. The ship was equipped with a powerful sending and receiving set, and they never tired of examining and discussing the intricate details of the delicate mechanism. The chief radio operator was an enthusiast in his own line, and had facts and figures at his finger tips. He claimed he could do almost anything in radio with the equipment he had on board the *Meteor*, and the boys had little doubt that his claims were justified.

"How would you like to be chief radio opera-

tor on board the *Leviathan?*" asked Joe, that morning. "I've heard that that ship has a better radio equipment than lots of the big land stations."

"Well, it has a better equipment than any other merchant ship afloat at the present time," said Johnson, the chief operator. "Why, the main transmitting set is almost six times as powerful as any set installed on a merchant vessel before. In addition to this, they have three additional radio stations, each one able to operate independently of the others. It's the last word, I can tell you."

"Sounds that way," admitted Bob. "How far can they transmit messages, do you suppose?"

"About as far as they'll ever want to, I guess. They have sent them thousands of miles already, even under unfavorable static conditions."

"They must have a big antenna, then," said Joe, somewhat skeptically. "They probably use a pretty long wave length."

"The main antenna is suspended between the topmasts, and is over six hundred feet long. It's about two hundred feet above the water, so you can see that they ought to get good results. The aerial is connected to a super-power vacuum-tube set of the latest design, and the transmitter can be operated on wave lengths of from one thousand eight hundred to two thousand eight hun-

dred meters. Oh, I'll admit I wouldn't mind being in charge of that equipment."

"Well, you'll likely enough work up to it," remarked Bob. "Somebody's going to have the job, and why not you? You're getting lots of experience on the *Meteor,* that's certain."

"Yes, there's plenty to do. It develops your speed, if nothing else. And you have to be on the job every minute, too. We often get calls for help, and that possibility keeps us up on our toes."

"While you have to work hard, you get fine chow, just the same," put in Jimmy. "That dinner we had yesterday was a poem."

"Trust Doughnuts to notice that," laughed Herb. "I'll bet you are bosom friends with the chief cook already, aren't you, Jimmy?"

"Well, I've had one or two little talks with him," admitted the fat boy. "He seemed to realize right away that I had sense enough to appreciate his good work, and we got quite chummy. He's even promised to make me some doughnuts as soon as he gets a chance."

"You've got to hand it to Jimmy," said Joe, solemnly shaking his head. "There isn't a place on earth that you could put Jimmy where he wouldn't have obtained a plentiful supply of doughnuts within a day or two after his arrival. Put him on a cannibal island, and he'd have the

king cooking doughnuts for him. Put him up at the North Pole, and he'd hunt up the champion Eskimo doughnut baker and have him on the job in no time. Wonderful, seems to me."

"Oh, there's nothing so wonderful about it," said Bob. "It just goes to show what can be done when you put your heart into a thing. Probably if we hankered after dollars as much as Jimmy hankers after doughnuts, we'd all be millionaires by now."

"It's an interesting theory," laughed Johnson. "I can't agree to it from my own personal experience, though. I've hankered pretty strongly after dollars at various times, and still I haven't got many of them."

"That just shows you've wanted something else more," replied Bob, with a grin. "Now, in Jimmy's case, there isn't anything that he wants more than doughnuts, so he concentrates on them, and very successfully, too. It's very seldom that he's without any."

"You're an ungrateful bunch," complained Jimmy. "Here I go and get the cook to fix up a treat for you, and do I get any thanks for it? None whatever, anywhere, any time, any place! You'll get me so that I won't worry about you any more, and then you'll be out of luck. You know that you couldn't get along without me to do your thinking for you."

"Thank heaven we don't have to rely on your brain work," remarked Herb. "If we did, we'd all have been done for long ago."

"All right, let it go at that. Just the same, you'll eat some of the doughnuts, won't you?"

"Well, that depends on the cook," answered Herb. "You try them first, Jimmy, and if they don't do you any harm, we can try them. If you should die, we'd know enough to leave them alone and no damage would be done."

Jimmy gave him a withering look, but before he could think of a suitable answer, the receiver clicked and Johnson raised his hand, asking for silence.

"Part of the news reports sent out in compressed form every day, to tell us what's happening in the States," he said. "If you fellows listen, you can get the day's news in tabloid. It's almost as good as having a newspaper, with the additional advantage that you're not bothered by the ads."

The boys listened with keen attention. They had been away so long from land that almost everything they heard had more or less interest for them.

There was news of what was going on in Washington, political measures, acts of Congress, treaties with foreign countries. Then there were

accounts of disasters, railroad wrecks, fires and sinkings.

Suddenly the boys stiffened and sat bolt upright in their seats, while their faces went pale with excitement. They held their breath. They had caught the words:

"Great fire in Clintonia; town swept by flames; great property damage; loss of life feared!"

CHAPTER XVI

THE RADIO WARNING

"CLINTONIA!" cried Bob. "That's our home town!"

"Swept by flames!" gasped Joe, the sweat starting out on his brow.

"Loss of life feared!" groaned Jimmy, as he visioned his own people perhaps trapped by the fire.

"I wonder if our folks were caught in it," moaned Herb.

Johnson and Marston looked at them with deep sympathy.

"I had forgotten that that's where you came from," said Johnson. "But you mustn't take it too hard. The message didn't say there was any actual loss of life. A fire isn't like an earthquake. People usually have a chance to get away from it. And as to the property, most of it was probably insured."

"And these first reports are usually exaggerated," put in Marston. "Folks lose their

heads in the excitement, and then, too, the newspapers make a big story of it for the sake of startling headlines. You just take my advice and don't worry too much until you get later news."

But their well-meant sympathy was of little avail. The Radio Boys were in an agony of grief and apprehension. A crushing blow had fallen upon them.

If they could only be there, on the spot, to share with their loved ones whatever of woe and loss had come to them! None of them knew but what they might at that moment be fatherless or motherless. The possible money loss was bad enough, but infinitely worse was that ominous clause at the end of the message with all of its sinister suggestion:

"Loss of life feared!"

Whose lives?

With the promise of the wireless men to use every means of getting further information as soon as possible sounding in their ears, the boys left the wireless room. They were on the way to their own cabin where they could think and talk over the calamity together, when they came across Captain Springer, who was just emerging from his room.

He started as he saw the ghastly looks on their faces.

"What is the matter?" he asked quickly.

In half-broken and almost incoherent words, they told him, and ready sympathy leaped into his face as he listened.

"That is indeed terrible news," he said gravely. "I feel it, not only for your sake, but for the sake of your people, to whom I am indebted for such kindly hospitality. It touches me very nearly. But let us hope it may turn out to be much less serious than you fear. I'll do my very best to get further information for you at the earliest moment possible."

They thanked him, and went on their way to the stateroom they shared together. There they exchanged their hopes and fears.

They saw the old Clintonia that they knew, where all of them had been born and brought up, with its pleasantly shaded streets, its schools, churches, homes and business blocks. It was a part of themselves, and they loved it. Now they visioned it as blackened and blighted, the houses mere masses of débris, a prey to the red fire demon they had learned to hate at that time when they had fought its fury in the flaming forests of Spruce Mountain.

But far worse than that was the possibility they conjured up of personal harm, perhaps death, having come to their dear ones. The material damage could be replaced, the town could be rebuilt and be made more beautiful than be-

fore, but nothing could restore their people if death had laid a hand on them.

They talked together for a long time, in low and trembling voices, and tried to cheer each other up. Then at last they climbed into their bunks and tried to sleep. But sleep refused to come to them, except in brief and fevered dozings, and it was a haggard group of Radio Boys that left the stateroom in the morning.

As soon as they could, they hurried to the radio room, where Marston, who was on duty, had been obeying the orders of the captain and doing all that he could, consistent with his other duties, to get in touch with Clintonia.

But so much difficulty was encountered in getting information, owing to the breakdown of telegraph and telephone service and the general state of confusion existing in the stricken town, that the effort had to be deferred to a more favorable time.

The boys were desperate at the necessity, but they summoned all their courage to sustain them during the waiting. The only thing to do was to bear their trouble manfully and hope for the best.

A warning that came by wireless helped to turn their minds for a time into another channel. A big iceberg had been sighted by a freight steamer. Latitude and longitude were given, and the

Meteor was soon tearing through the water in quest of the menace to life and property.

"How long will it take us to sight the iceberg?" inquired Bob.

"We'll probably reach it sometime to-morrow morning," answered Johnson. "Why are you so anxious to see your first iceberg?"

"Not so much to see the iceberg, as to see it blown up," replied Bob. "It must be a sight worth watching."

"The real excitement," affirmed Johnson, "is in boarding the iceberg and setting the charge. TNT isn't the safest thing in the world to handle, and ice is slippery stuff to travel on. Oh, there's plenty of excitement at times for the landing party."

"That means that we'll have to be part of the landing party then," announced Bob. "How about it, fellows?"

"Not for mine!" exclaimed Jimmy, raising one hand in the attitude of taking an oath. "You fellows can climb around icebergs with cans of explosive strapped to your backs all you want to, but I'll stick to the ship and watch you work. Besides, to-morrow's the day I get my doughnuts, and I can't take a chance on missing them."

"Well, then, we'll have to struggle along without you," said Joe. "I want to be in on whatever's doing, though. How about you, Herb?"

"Surest thing you know! I don't think we ought to let Jimmy off so easily, though. He'd make an ideal one to carry the TNT. If he slipped, he could let the can fall on top of him, and he's so nice and fat that it would cushion the fall."

"I suppose it wouldn't matter if it broke a few of my ribs, would it?" asked the fat boy.

"Oh, well, it would be in a good cause, so you oughtn't to mind."

"Perhaps not; but I do, all the same. Anyway, it isn't likely that Captain Springer will let any of you go."

"Maybe not; but we'll try. Come on, fellows, let's put it up to the captain right away and get it over with."

Jimmy's prediction pretty nearly came true, for at first Captain Springer was very reluctant to let them go. But Bob urged so earnestly and yet respectfully, and the captain had so high an idea of the courage and common sense of the boys, that, at least, he was open to argument. At length, ably seconded by his friends, Bob won the captain over to his point of view, and it was settled that they should be included in the landing party.

This settled, the boys set themselves to await, with what patience they could, until they should reach the iceberg.

The *Meteor* held a fast pace all night, and

shortly after daybreak of the following day the lookout in the crow's nest sighted the wandering berg. It was a big one; in fact, one of the largest they had ever had to handle, one of the crew told Bob. It would be no easy task to break it up, and the boys were assured of plenty of excitement while the attempt was in progress.

Immediately after breakfast a boat was lowered, and the crew, including Bob and Joe and Herb, took their places at the oars. In the stern were two cans of TNT, each about as large as an ordinary nail keg. There was enough high explosive in each one to tear the *Meteor* to shreds had it gone off, and, as can be imagined, the cans were carefully handled.

In a few minutes all was in readiness, and the second officer, Mr. Mayhew, who was in charge of the boat, gave the command to shove off. The crew gave way with a will, and the boat dashed off toward the iceberg.

CHAPTER XVII

RENDING THE GIANT BERG ASUNDER

"Isn't it a monster?" said Bob, with something like awe in his voice.

"Must be the Jumbo of icebergs," conceded Joe.

"Hate to have it take a notion to fall over on us," murmured Herb.

The big berg towered up fully eighty feet into the air, and from a distance its long outline resembled that of a city, with graceful church spires shooting up here and there. In the rays of the sun it gave off a bluish white reflection, and as the brilliant light was reflected back from projections and angles it seemed as though the berg were scintillating with jewels.

It was a sight to arouse the enthusiasm of a painter, and the boys were impressed by the beauty of the spectacle, even though their errand was to destroy it. A brisk breeze that covered the sea with whitecaps was blowing, but in the lee of the berg absolute calmness reigned. The air grew sensibly colder as they approached the

big mountain of ice, a cold breath that seemed to carry warning and menace with it.

The Radio Boys buttoned their warm coats closer about them and rowed harder to keep warm. Their efforts and those of the rest of the crew sent the boat bounding over the water, and soon they were close enough to see details and look for a good place to land. This was not easy to find, as in most places the berg rose up steeply from the ocean, and a landing would have been impossible.

At length, however, they discovered a place where the ice ran down to the water in a long slope and where it would be fairly easy to get a foothold. The boat was rowed close to the ice, and one of the men, carrying the painter, leaped to the ice. Most of the others, including the Radio Boys, followed him, leaving only two men to manage the boat while they were away. Then the cans of TNT were carefully transferred to the ice, and under the leadership of the officer the party started a difficult climb up the steep ice slopes toward the summit.

In blowing up an iceberg, the first thing to do is reach the approximate center of the berg and then lower the TNT down some deep crevasse, such as is always to be found in ice formations. A time fuse is then attached, so set as to give the

party ample time to get away from the berg before the explosion occurs.

From a distance the berg had looked as smooth as glass, but, now that they were at close quarters, the Radio Boys found that this was not the case. The surface of the berg was pitted and seamed with deep depressions, cracks, and miniature hills and valleys. At some points the ascent was so steep that steps had to be chopped in the ice before they could go farther, and at all times they had to use the utmost care in traveling on such slippery and treacherous material as ice.

"Seems to me Jimmy was the wise one, after all," panted Herb. "If he could see us now, he'd have the laugh on us, sure."

"It's all in a lifetime," said Bob. "I'll admit, though, that I never knew an iceberg could be as hard to get over as this one is."

"We must be pretty near our objective now, though, I should say," added Joe.

He was not far wrong, for after a little more breath-taking climbing, stumbling, and slipping, Mr. Mayhew called a halt at the edge of a deep crevasse that, as the boys looked down, seemed to them to have no bottom.

"This will do nicely, lads," the officer said. "We'll take a little rest, and then we'll lower the explosive."

Some of the men fished out blackened pipes and had a short smoke. Then, at a word from the officer, they knocked out the ashes and proceeded to work.

Long ropes were swung around the cans of TNT, of which they had two, and then Mr. Mayhew very carefully adjusted the time fuses.

"That will give us two hours to get away," he remarked. "If we can't make the ship in that time, we'll deserve to be blown up. Lower away, men, and we'll be on our way."

Hand over hand the men lowered the explosive into the deep green chasm. It was a long time before the cans stopped descending, but stop they did at last, and the men drew up the ropes. These were quickly coiled, and then the little party started back for their boat at a sharp clip. They knew that they had plenty of time, and yet the thought of that TNT buried in the heart of the berg destroyed all desire to linger and thus lessen the hardships of their departure.

About half the distance back had been covered when suddenly, as they were skirting around a crevasse, Joe slipped on a smooth slope of ice and with a startled cry disappeared over the edge of the abyss.

For a moment all were stunned by the accident. Then, at the risk of their own lives, Bob and Herb rushed to the edge and peered over.

But the sun, reflecting on the glistening wall, made it impossible to see far, and they could make out no sign of their friend. Had Joe been killed by the fall, or was he only stunned and unconscious? A great dread tugged at their hearts as they realized how little chance any one could have of surviving such a fall.

"Poor Joe!" whispered Herb. "What shall we do, Bob?"

"Go after him, of course," was the decisive reply. "And we've got to go fast, because that TNT isn't going to wait a minute for us."

Mr. Mayhew overheard the boys as he and others of the crew approached the edge of the cleft, and he glanced at his watch.

"I would like to have two men volunteer to stay with me and the Radio Boys and try to rescue young Atwood," he said. "The others will return immediately to the boat."

Every member of the crew volunteered, and Mr. Mayhew selected two of the best men. Then he sent the rest back to the ship, and the little group of rescuers turned to their task with feverish energy.

"Some one will have to be lowered into the crevasse," said the officer. "Who shall it be?"

Like a flash both Bob and Herb demanded the post of greatest danger. Bob was selected, as being the stronger. A rope was quickly made

fast under his arms, and he was quickly lowered into the cold green depths of the iceberg.

Down, down he went, calling to his friend as he progressed. His own voice echoed and re-echoed in the depths, and once he was sure that he heard a faint cry far below him. After what seemed a long time, his feet struck a hard surface, and he found himself on a wide ledge that ran along the face of the ice wall.

He could see nothing of his friend, but this time, when he called out, he was certain that he heard Joe's answering cry at no great distance. It seemed to come from the left, and Bob cautiously felt his way along the ledge, keeping as close to the wall as he could. He called again, and this time Joe's voice was nearer. Keeping on, Bob rounded a slight projection and came face to face with his friend.

Joe was pale and shaken, but a great surge of relief went over Bob as he saw that his chum was on his feet, and apparently not badly hurt.

"Thank heaven I've found you, old fellow!" exclaimed Bob, a little brokenly. "How are you feeling?"

"A bit shaky, and weak in the knees, but I'll get over that," Joe replied, with an attempt at his old grin. "How are we going to get out of this?"

"I'll tie this rope around you, and they can pull you up first. Then they can let it down again, and I'll come up. We've got to work fast though," and he looked significantly at his friend.

"Gee! The TNT!" exclaimed Joe. "I'd forgotten all about it. But you go up first, Bob, and I'll wait below."

"Nothing doing! We haven't time to argue, young fellow, so put this rope under your arms and I'll give the signal for you to be hauled up."

Joe saw there was no time for argument, so he let Bob fasten the rope under his arms. Then Bob gave it a tug, and a moment later Joe ascended swiftly as stout arms hauled at the cord.

Left alone in the cold green depths, Bob shivered. Over an hour gone already, he felt sure. In less than another hour the TNT would explode, rending the berg to fragments! Bob did not have to think hard to realize what would happen to any one on the iceberg at that time. It seemed an age before the rope came twisting down to him, and he lost no time in passing the loop over his head and under his arms. Then he was hauled swiftly up into the thrice welcome sunlight, where he stood blinking like an owl in the glare.

"All right, men, back to the boat on the double. We've got to get off this berg, and get off quick,

or you know what's going to happen to us. How are you feeling, Atwood? Can you make a run for it?"

"With two cans of TNT back of me, I can travel fast," declared Joe, and they set out on a run for the boat and safety.

Sliding, slipping, and leaping, they ran across the slippery ice at breakneck speed, taking desperate chances as the realization of their growing peril sank home. Their time was growing short, and they still had a long way to go.

What if Mr. Mayhew had timed the fuse a little short? In that case, the explosion might occur at any moment now, and the thought gave wings to their feet.

At one place where they had laboriously cut steps in the ice coming up, they disregarded them altogether, and slid down the slippery green slope at terrific speed, slowing up enough when they reached a level space to climb to their feet. Joe, weakened by his fall, was unable to hold the furious pace, and toward the last Bob ran on one side of him and Herb on the other, helping him along over the most difficult places.

At length they sighted the ocean, and this gave them heart for a final wild sprint. To their joy, they saw that Captain Springer had replaced the rowboat by the ship's motorboat, so that they could get away more quickly.

The men in the boat saw them and came in close to the ice, uttering encouraging shouts. Summoning up their last ounce of energy, the landing party rushed over the last hundred yards and leaped helter-skelter into the boat.

The launch turned, and, with the engine roaring at top speed, tore away from the iceberg. In a few minutes they were alongside the *Meteor,* the falls were hooked on, and the motorboat was lifted out of the water while the *Meteor* got under way.

They had hardly gone a quarter of a mile when a deafening explosion rent the air, and the iceberg, which a few seconds before had looked so solid and substantial, seemed to dissolve into thin air. For a time a thick vapor hung over the spot, and when it thinned out, nothing was to be seen of the big iceberg but splintered ice cakes bobbing about on the foam-crested waves.

CHAPTER XVIII

A GLORIOUS PANORAMA

"ONE more iceberg bit the dust!" exclaimed Jimmy, in a melodramatic tone.

"Rather wet dust," returned Herb, with a grin. "But look at the big chunks of ice floating about. There must be a thousand of those baby bergs."

"They're too small to do any damage," remarked Bob. "They'll soon melt; and, anyway, if a vessel touched them she'd nose them aside."

"Johnson was telling me the other day that the fishing smacks tow in some of those small chunks, and so lay in their summer ice supply," remarked Jimmy.

"At any rate, that makes them of some use in the world," affirmed Herb.

"How are you feeling now, Joe?" asked Bob, turning to his chum.

"I'm all right," answered Joe. "But I never want to have such a close call as I had on that berg. If you hadn't got to me just as you did, I'd have gone up with the berg."

"It surely was a case of touch and go," replied Bob. "Gee, but my heart stood still for a moment when I missed you and thought of that TNT!"

The *Meteor* sped on her course, and soon had made her way out of the welter of ice fragments that strewed the sea. Several times in the course of the next few hours, they sighted other bergs, but none that was nearly so large as the one they had destroyed. The positions of these smaller ice mountains were carefully noted, and their locations wirelessed to all vessels that might be within the zone of danger.

"But that only gives the positions at the time they're discovered," remarked Jimmy, with a slightly puzzled air. "They're getting away from that location all the time."

"True enough," explained Bob. "But they're moving at the rate of about seven-tenths of a mile an hour. Given the direction of the drift, the vessel that is warned can figure just where that special berg will be with every hour that passes."

The incident had served to engross their minds for the time being, but now their thoughts returned with a doubled intensity to those at home.

"No news yet," groaned Joe, after a fruitless errand to the wireless room.

"Let's hope that in this case no news is good

news," replied Bob, with a greater display of confidence than he really felt.

"If only our folks' lives are safe!" muttered Jimmy.

There was silence for a few minutes, each busy with his own troubled thoughts.

"The operator says that he's heard nothing yet of Mr. Strong having been picked up," was the further bad news that Joe gave them.

"If he's lost, that means that your watch is lost too," Jimmy observed to Bob.

"I'd rather lose any other thing that I own than that watch," said Bob, mournfully. "It was a beauty. But, after all, I'd gladly give that to know that Mr. Strong was safe."

At about three o'clock in the afternoon the *Meteor* hove to, about half a mile away from a small iceberg.

"Wonder what's up now," remarked Joe, as he noted the slowing down of the engines. "Going to make a visit to that berg, I wonder?"

"No sign of lowering boats," responded Bob. "They're swinging out a big boom at right angles to the ship."

"And the boom has ladders that reach down to the water," chimed in Herb. "What kind of a Chinese puzzle is this, anyway?"

The boys' bewilderment was increased as they

noted that a large number of the crew were stripping off their clothes.

"By ginger, they're going in swimming!" exclaimed Bob.

"Swimming in sight of an iceberg!" ejaculated Joe. "Why, they must be crazy!"

"I've heard of fellows going into the surf on the first of January," put in Herb. "But I've always put them down as plain nuts. Look, there go some of them now!"

Several of the sailors had gone out on the boom, which was so broad that it afforded sufficiently safe footing.

Even as Herb spoke, one of them poised himself with uplifted hands, and then, straight as an arrow, dived into the blue depths below.

His companions followed his example, and presently a score or more were frolicking around like so many dolphins and enjoying themselves to the utmost.

"Come on in, the water's fine!" they shouted to some of their more hesitant companions on the boom.

"Well, that beats me!" exclaimed Herb. "I've always heard that sailors were a hardy bunch, but this is the limit. The water must be freezing!"

"Not a bit of it," said a voice beside them, and

they looked up to see Ensign Porter. "I think you'd enjoy it if you went in yourselves. That is, assuming you can swim."

"We can swim, all right," replied Bob. "But we've been used to doing our swimming in the summer."

"This is summer, isn't it?" replied the ensign, with a quizzical smile.

"Of course," assented Jimmy. "But there aren't icebergs where we go in. I should think these fellows would freeze to death."

"They don't seem to be shivering," remarked the ensign. "As a matter of fact, I'll wager that you've often been in water that was colder than this."

"Show us what you've got up your sleeve," urged Bob. "You're just kidding us along."

"It's simple enough," was the smiling reply. "The *Meteor* has picked out a warm strip of water for her men to bathe in. At the present moment, she's lying right across it. The water temperature is twenty-two degrees colder at one end of the boat than it is at the other. At the bow it's thirty-four, at the stern it's fifty-six."

"It doesn't seem possible," ejaculated Bob.

"A good many things are possible in this part of the world," replied the ensign. "That's what forms one of the fascinating features of our work. You see, the boundary line between the

cold Labrador Current and the Gulf Stream is very sharply defined, and we're just astride it at this moment."

"But how do you pick it out?" asked Joe, in wonderment. "I can recognize boundaries on land, all right; but how you can see them in the water is beyond me."

"Matter of practice," was the reply. "We can tell by the color of the water and the 'rips' between the two currents. If you'll look closely, you'll be able to see a decided difference between the color of the water at the stern and the water at the bow."

"I can see it now," declared Joe, after a moment's close scrutiny. "But I'd never have noticed it if you hadn't called our attention to it."

Bob looked enviously at the men sporting around in evident enjoyment in the water.

"I've a good mind to take a crack at it," he said suddenly. "What do you say, fellows? Are you game?"

"I never take a dare," replied Joe.

"Count me in," said Herb.

"I'm with you," chimed in Jimmy.

They sought and got permission from Lieutenant Mayhew, who just then was the officer of the deck, and hurried to their cabin, where they slipped on the bathing trunks that they had packed in their suitcases when they started on

their trip. In a short time they were ready and made for the deck.

"Last one in is a Chinaman," sang out Bob, as he raced for the boom.

All sought to avoid the stigma, but Jimmy, with his short legs, was at a disadvantage and proved to be the Chinaman. At that, he was so slightly behind the others that the splash of the four bodies as they went down was almost simultaneous.

Despite the ensign's assurances, they had not felt quite sure as to the temperature of the water, but as they rose after their immersion and shook the water from their eyes, they were agreeably surprised to find that there was none of the heart-gripping cold they had half anticipated.

"Why, the water's as warm as milk!" sputtered Joe, with a little exaggeration, as he struck out.

"Like milk that's been standing in the refrigerator for a while," corrected Herb. "But it isn't so bad, at that. I've found it colder sometimes in an early morning swim at Ocean Point."

They were overjoyed beyond measure to find themselves at a pastime that they had mentally relinquished for the rest of that year, and they made the most of it. Again and again, they climbed up the ladder and dived from the boom. They were all good swimmers, and their skill in that respect earned them the respect of

the sailors. The men at first had been inclined to grin at the "land-lubbers," but they were soon forced to admit that there was little they could teach them when it came to swimming.

It was with reluctance that, a little later on, they obeyed the order given from the deck that the sport must end for the present, and they promised themselves that they would avail themselves of every opportunity of the kind that might offer in the future.

They were immensely exhilarated and refreshed by the swim and the rub-down that followed it, and that night at the table they showed the steward a quartette of appetites that made that functionary's eyes bulge with wonder and admiration. Jimmy especially was at the top of his form, and made a clean sweep of everything within his reach.

When at last they had finished and come on deck, the horizon was aflame with glory of the aurora borealis. The beauty of it made them catch their breaths. They had seen very rarely that wonderful phenomenon, and never in such magnificence as it was now revealing under the northern skies.

All the colors of the rainbow were there, but shining with a splendor and radiance beyond all words. Great bands of many colored light shot out like a gigantic fan until the sky seemed to be

blazing with millions of jeweled shafts. And these kept shifting, deepening, advancing, retreating, each combination of rarer loveliness than the one that preceded it until it seemed that Nature herself, the supreme artist, could do no more.

Awed into silence by the spectacle, the boys watched it spellbound. They were aroused at last by a voice behind them.

"Beautiful, isn't it?" said Johnson, the wireless operator, taking a seat beside them.

"Beyond anything I've ever seen," answered Bob.

"There's just one thing I have against it," continued Johnson.

"What's that?" asked Joe, in surprise.

"It's put my wireless out of commission!"

CHAPTER XIX

WIRELESS WONDERS

"WHAT do you mean?" asked Bob, secretly wondering whether the wireless man was trying to mystify him.

"Just what I say," repeated Johnson. "My set goes practically dead while the aurora borealis is getting in its work. Can't send, can't receive. When that begins to flood the sky—and it does it pretty often up in these latitudes—it means that my helpers and I get a little vacation."

"I should think you'd be glad of it," remarked lazy Herb.

"Oh, of course a little unexpected rest is welcome once in a while," admitted Johnson. "But all the same it leaves me uneasy. How do I know but at this very moment some ship in distress may be signaling us for help and we can't get the message?"

"I suppose you feel something as a fireman would at a fire if he found his hose was cut," conjectured Joe.

"Something like that," replied Johnson. "Only my comfort is that there may not be a fire. Nothing may happen, of course, when your set is out of commission, and then again anything may happen. There's no help for it, though, and I've simply got to wait until the aurora gets ready to say good-night."

"It's queer that it should have that effect," mused Bob, thoughtfully. "What do you suppose the reason is?"

"That's something the scientists haven't found out yet," was the reply. "There have been a lot of theories, but none of them's satisfactory. All we know is that there's so much electrical energy let loose when the aurora is working that our poor little signals get lost in the shuffle. Some day, though, the radio sharps will be able to tell us all about it."

"I should think that that would have a serious effect upon the radio sets of the airships they are planning to fly to the Pole," remarked Joe, as his thoughts went back to the *Shooting Star* and her outfit. "Just at the time they most need to communicate with the people south of them, they may find that there's nothing doing."

"There's a chance of that, of course," conceded Johnson. "But there are so many chances connected with Arctic exploration that one more doesn't make much difference. There's Amund-

sen now and McMillan, the one up in the Arctic ice and the other in Baffin Land. They're counting largely on keeping in touch with civilization by radio, and occasionally they have. But there have been quite a number of cases where stations in the United States have tried to communicate with them but evidently didn't, for they have received no answer. The fault hasn't been with the sending set, which was plenty powerful enough to reach them. My guess is that the failure's been due to the aurora borealis. It's a beautiful thing all right, but there are times when one would like to have a little less beauty and a little better communication."

"It seems to be fading now," remarked Bob, as his glance swept the sky. "It isn't so bright as it was, and it isn't covering as much space."

"It'll last for about another hour," judged Johnson; "and then my enforced vacation will be over."

"You fellows are as busy as a hive of bees most of the time," observed Jimmy. "Don't you get so tired sometimes that you'd like to chuck the job?"

"No, I've never got so tired as that," replied Johnson. "The truth is, I'm such a fan on radio that I'd rather handle a set than eat."

There was an exclamation from Jimmy at this.

"Jimmy thinks you're losing your mind when you say that," chuckled Joe.

"Perhaps I was putting it a little strongly," said the operator, with a grin, while Jimmy looked reproachfully at Joe. "But, honestly, I think radio is the greatest thing in this whole universe. Every day something turns up that gives me a new angle on its limitless possibilities. What hasn't it done? What can't it do? What won't it do?"

"You're getting eloquent," said Bob, with a smile.

"It's enough to make a dumb man eloquent," returned Johnson. "I tell you, radio is almost human. It seems to have an intellgence of its own. Why, already it's doing things that formerly only men could do. It directs ships. It guides torpedoes. It flies planes.

"Only the other day," he went on, warming to his theme, "an airplane in France rose and flew and landed just as skillfully and accurately as though it had been managed by a pilot on board. And it was all directed by wireless from the ground. The machine was a big bombing plane with a thirty-three horsepower engine. It flew easily, maneuvered freely, and landed and rose several times in succession, without a hitch of any

kind. A stabilizer with four gyroscopes maintained the equilibrium automatically, while a speed device cut off the spark when the plane neared the ground, so that it landed so gently that it wouldn't have broken a pane of glass.

"And mark my words, that's only one step in the process of dispensing with human assistance altogether. I'll bet that in my lifetime ships will be sailing across the ocean without a steersman, railroad trains will go speeding across the country at the rate of sixty miles an hour without a man at the throttle."

"It'll throw a lot of men out of their jobs," remarked Joe.

"For a while," admitted Johnson. "Just as the railroad threw bus drivers out of their jobs, just as the spinning jenny threw weavers out of their jobs, just as every advance in civilization has made readjustments necessary. But, after a while, it makes more and better jobs, and raises the general level of human happiness."

"You're safe, whatever happens," grinned Joe.

"I'm not so sure of that," was the unexpected answer. "Radio itself may throw me out of a radio job."

"What do you mean by that?" asked Herb.

"Sounds to me something like a riddle," said Jimmy, rubbing his forehead in perplexity.

"Fact, just the same," Johnson reiterated. "Radio itself will drive radio without the aid of an operator. They proved that that was possible in New York only a few weeks ago. By an arrangement of the controlling circuit of the longest commercial radio service in the world, from New York to Warsaw, Poland, they were able to make automatic signaling a substitute for operators. Radio was made to control radio, and thus over an eight thousand five hundred mile circuit continuous signaling was produced without human assistance."

"Sounds to me as though I were listening to you read me something out of 'Alice in Wonderland,'" said Herb.

"There are more things in heaven and earth than are dreamed of in our philosophy," quoted the operator. "And among these, radio takes the first place.

"But there," he continued, rising from his seat, "I've talked you fellows nearly to death, and, anyhow, the aurora is on its last legs and I've got to get back to my work."

The boys could have listened to him all night, and told him so.

"Come down to my room to-morrow, and I'll give you some idea of the multitude of things that radio does in the matter of the iceberg patrol," he invited. "I suppose you boys think

that about all we have to do is to report on the position of icebergs when we spot them. Isn't that so?"

"I thought it was mainly that," Bob answered for them.

"Well, come in and see how greatly you're mistaken," said Johnson, with a grin, as he left them.

CHAPTER XX

IN STATELY PROCESSION

THE next morning after breakfast, Bob was the first one to reach the deck, while Jimmy brought up the rear, with Hector at his heels.

But a shout of surprise and excitement from Bob caused even Jimmy's laggard feet to hasten.

"Hurry, fellows!" Bob fairly shouted. "Here's a whole fleet of icebergs! You're missing the sight of your lives!"

His chums' excitement was quite as great as Bob's as they ranged themselves by his side at the rail and saw the magnificent spectacle that had provoked his outburst.

Moving along majestically and slowly were scores of icebergs, their icy pinnacles catching the rays of the sun and throwing them back in a thousand prismatic lights. They were of all sizes and areas and shapes. Some of them were solid, irregularly formed masses of ice; others had great passageways in them like Gothic arches; still others towered aloft like mighty

cathedrals, with spires and towers shooting toward the skies.

The Radio Boys were breathless with rapt admiration. No painter's brush could ever have rendered the glory of the scene. No dreamer's imagination could have compassed it. It was sublime, supremely and compellingly beautiful.

"Must be nearly a hundred," conjectured Jimmy.

"Fully that many," conceded Bob. "But I don't want to count them. I just want to look at them. It's even a grander sight than the aurora last night."

"Look at that big one on the right," said Joe. "That must be hundreds of feet high. The top looks as though it were going right up into the sky.

"What's that noise?" exclaimed Herb, as a sharp succession of reports came to their ears.

The question was promptly answered. The giant peak to which Joe had pointed began to sway to and fro with a rhythmic motion, and then, with one last thunderous roar, fell over into the sea, sending a column of water hundreds of feet high into the air.

"What made that, I wonder!" exclaimed Joe, when their first stunned sensation had subsided.

"I guess it was about due to fall," remarked

Bob. "That's the way they go to pieces. Perhaps just the wash from the *Meteor* disturbed its balance and set it going. They're something like the avalanches that get started sometimes just by a hand clap or the sound of the human voice. Now just watch, and I'll bet that the noise caused by that fall will start lots of the others to going."

His prophecy was correct, for a number of the other icebergs broke apart, following the fate of their companion. New spires and angles took the place of those that were lost, and the contours changed almost with the rapidity of the figures in a kaleidoscope. But whatever the changes, the net result was beauty. It was as though Nature were determined that her handicraft should not be marred even though changed materially in form.

For several hours the boys remained as though riveted to the deck, feasting their eyes on the sight before them. They were thrilled, they were deeply affected by the beauty of the changing bergs.

Others on the *Meteor,* however, had none of their leisure to enjoy the spectacle. The situation was one that called for the greatest care and vigilance. The wireless operators were up to their ears in work with the sending of warning messages to all vessels that were in or nearing

the zone of danger, and officers and crew were active and anxious for the safety of the *Meteor* herself.

The vessel was under the necessity of keeping near enough to the bergs to map and measure them, and yet far enough away to prevent any possibility of coming in contact with an under-water projection of a berg. The boys had sense enough not to ask questions or get in the way during this anxious period, and for their part were perfectly content to be left to themselves and keep their eyes on the spectacle of absorbing interest.

Gradually the *Meteor* worked herself into a position to the north of the whole fleet that kept drifting steadily away to the south, leaving only one great berg as a rearguard at the end of the procession.

They were studying this, half regretting its gradual withdrawal, when Captain Springer, who now had time to draw his breath, stopped as he was passing by where they were standing at the rail.

"Well, boys," he said, with a genial smile, "what do you think of the free show that you've had this morning?"

"Wonderful," answered Bob with enthusiasm.

"The most magnificent thing in the world," affirmed Joe.

"Beats anything I ever saw or dreamed of," declared Herb.

"That one thing alone was worth the whole trip to get here," asserted Jimmy, and even Hector joined in with a series of barks as though he also wanted to show his approval.

"Seems to be unanimous," observed the captain. "I don't wonder, for though it's my business to hate the icebergs, track them down, destroy them, I have to admit their beauty."

"Do you often see so many in a flock?" asked Joe.

"Not often," was the reply. "Though as many as a hundred and twenty-five have occasionally been seen together. Sometimes a peculiar twist of the current throws them together, and then they move along like a regiment. More often, however, they seem to prefer to flock by themselves or in small groups."

"It looks as though they were bringing down all the ice there is in the Arctic," remarked Joe.

"There's plenty more where they came from," laughed the captain. "As a matter of fact, they don't come from the Arctic ice floes. They're part of the ice cap that breaks off from the coast of Greenland. And they're not composed entirely of ice, although they appear to be. When they break away, they bring with them hundreds

of tons of dirt and gravel. That gradually drops away as they get into the warmer waters, and sinks to the bottom of the sea."

"That berg over there seems to be the grand-daddy of them all," said Bob.

"It is pretty big," admitted the captain. "But it's nothing near as big as some of them. One of them that was reported a little while ago by an ice-patrol boat, was estimated to contain thirty-six million tons of ice."

"There comes a vessel!" exclaimed Bob, whose keen eyes had descried a hull a long distance off and coming rapidly in their direction.

The captain leveled his glasses upon the approaching steamer.

"A tramp," he remarked, as he failed to note any signs indicating that she was a liner. "One of the vessels, no doubt, that got our wireless message a little while ago. Not that it matters so much in broad daylight, as she can see the berg for herself."

They watched the vessel with the interest that always attaches itself to anything that lifts itself above the horizon on the great wastes of the sea.

"Her course seems to be bringing her pretty close to the iceberg," remarked Bob, with a sudden quickening of interest.

"So it is!" exclaimed the captain, an anxious pucker showing itself in his brow. "What can the captain be thinking of?"

He left them abruptly and hurried away to the wireless room.

On came the ship, perilously close, the boys thought, to the iceberg, which, however, stood clearly revealed in the splendor of the sun.

The next moment a cry of horror broke from the boys.

The vessel they had been watching was being lifted slowly up into the air!

CHAPTER XXI

BY A HAIR'S-BREADTH

THE shouts of the Radio Boys were echoed by cries from other throats, for several of the officers and many of the crew of the *Meteor* had been watching the oncoming steamer.

Up rose the vessel inch by inch, foot by foot, slowly but surely, the dripping slope of the hull that had up to now been below the waterline rising above the surface. It was as though some monster of the sea had gripped the keel and was pushing it aloft.

For a moment the boys stood stunned and paralyzed. They felt as though they were in a nightmare. They could scarcely believe their eyes. Were the laws of nature being reversed? What mysterious force was lifting this huge vessel with its cargo of freight and human souls? And what gigantic lever was this mysterious force pressing?

Bob was the first of the boys to grasp the meaning of the phenomenon.

"Look!" he shouted. "Look at the iceberg! It's tipping the other way."

The other lads followed the direction of Bob's pointing finger and saw the peak of the great berg slowly careening in a direction opposite to that of the apparently doomed vessel. And as it dipped in one direction, the ship was lifted that much higher in the other.

Then they understood.

The captain, in running so close to the berg, had apparently forgotten for the moment that a great spur of the monster might be projecting horizontally under the surface of the water. This had happened to be the fact in this particular case. The ship had come so close that the wash from its engines had disturbed the delicate equilibrium of the berg and it had tipped. As it careened, the underwater spur rose with it, and as the vessel was passing over it at the time, the spur had come up like a mighty hand and lifted the ship with it.

"She'll be thrown off!" cried Joe, pantingly.

"And probably turn turtle!" added Herb, horrified.

The boy's faces were as pale as death as they sensed the nearness of tragedy. If the ship were upset, it might mean the loss of scores of lives.

Their agony of apprehension was increased by the certainty that they could do nothing to pre-

vent it. They had to stand by helplessly, and perhaps see fellow men go to their death.

"Nothing but a miracle can save them," muttered Bob, between his clenched teeth.

And at just that instant the "miracle" happened.

There was a sharp report, and the great pinnacle of the berg snapped off on the side opposite to the ship and fell with a thunderous splash into the sea. The berg, relieved of the weight on the side to which it was leaning, began to swing back again like a pendulum.

As it did so, the spur sank deeper, letting the ship down again into the water. Sliding, grating, rasping, the vessel slipped into deeper water until she again rode the sea at her regular water line.

Then, like a frightened deer released from the grasp of the hunter, the ship that had had such a narrow escape hastened away from the icy monster until it had got safely out of reach.

A gasp of relief broke from the boys and from all the witnesses of what was almost a tragedy.

"Gee!" exclaimed Bob, wiping away the sweat that had started from his brow under the tremendous mental strain. "That's a case of looking death straight in the eyes and yet getting away from him."

"I don't want to see any shave so close as that again," ejaculated Joe.

"They seem to have been injured," remarked Herb. "The vessel is slowing down."

"It would be surprising if they hadn't been hurt," observed Jimmy. "They didn't have time to shut off steam, and their screws probably came in contact with the ice. But they haven't any kick coming if it's only an injury to the vessel they've got to worry about. They ought to be glad that they're still alive."

The vessel had now come to a stop, and signals were interchanged with the *Meteor* by wireless that caused the latter to swing about in its course and steam toward the injured ship.

When within a few hundred feet, the *Meteor* lowered a boat and sent over a party in command of Lieutenant Milton.

It developed that, as the boys had conjectured, the screw of the vessel had suffered from contact with the ice, and Captain Springer loaned the ship the services of some of his skilled mechanics to assist in putting it again in working order.

Several hours were thus consumed, and it was nearly dark before the damage had been sufficiently patched up to permit the vessel to continue the journey that had come so near to being cut short.

It was from Ensign Porter that the Radio Boys later learned the details of the occurrence.

"Just a case for the fool-killer," the latter told them. "Only in that instance he didn't happen to be on the job. The captain explained the whole matter sheepishly enough to Lieutenant Milton when he went over.

"The vessel's a tramp freighter, but of pretty good size. This trip she is carrying as passengers some relatives of the owner.

"It seems that some of the passengers on board had never seen an iceberg before, and they were so crazy over it that they urged the captain to go close to it, so that they could have a better view. He was weak enough to yield to their pleadings, and nearly paid the penalty with his life and theirs. He confessed to the lieutenant that he had forgotten for the moment that a spur might be stretched out under the water."

"I'll bet that when he felt the steamer being lifted up he was scared stiff," remarked Bob.

"That's a safe bet," replied the ensign, with a smile. "I shouldn't be surprised if the carelessness cost him his position. Owners don't like that kind of man to command their vessels. As for the passengers, it's safe to say that they've lost all curiosity concerning icebergs, and will be content from now on to view them from a distance.

"It was not only the danger from the spur that should have kept him from getting so close," went on the ensign, "but the possibility of part of the berg falling over on the ship. The bergs are breaking up all the time, and they only need something like the vibrations from a ship's engine to set them going. The only safe thing with an iceberg is to give it as wide a berth as possible."

"That underwater spur gives one the creeps," said Joe. "You can see the iceberg, but you can't see the spur. It's like some great devilfish lying in wait to grip you."

"That's what it was that ripped the vitals out of the *Titanic*," said the ensign. "The vessel didn't come in contact with the part of the berg above the surface. She sensed that she was near the berg, and turned to escape it. But that deadly spur reached out and caught her."

"I wonder if that disaster would have occurred if they'd known as much about radio as they do now," observed Jimmy.

"Probably not," was the reply. "At that time they relied chiefly upon the sudden chill in the air and upon the lookout to warn them of the nearness of the bergs. But both of those reliances were broken reeds. Sometimes the chill in the air under certain atmospheric conditions is scarcely perceptible, and in case of fog or dark-

ness, the lookouts aren't much good. Now, we on the *Meteor* could shut our eyes and yet know when we were getting near a berg."

"How is that?" asked Bob, with interest.

"We have what is called an iceberg alarm," explained Ensign Porter. "It's a modification of the apparatus recently used by the navy for ascertaining ocean depths by echoes."

"Echoes?" said Joe, inquiringly.

"Yes," was the reply. "You see, a sound wave is sent to the sea bottom by a transmitter, and when it returns as an echo is heaved in a receiver. The interval of time between sending and receiving determines the distance of the bottom from the ship's hull, since it is known that sound travels at the rate of about one thousand one hundred feet a second.

"Now, by the same methods, echoes may be obtained from icebergs. Precautionary signals are being sent out all the time by the transmitter on board, and when the echoes come back, we can tell if there are any icebergs in the vicinity, just how far off they are, and govern the ship's movements accordingly."

"It's a sort of comforting feeling," said Herb, "to know that to-night and every night, even while we're asleep, the iceberg alarm is on the job."

"Never thought of it before, did you?" asked

the ensign. "Uncle Sam's a pretty good relative, and he looks after the safety of his nephews. This ship has a good many wonders packed between the bow and stern, and you'll learn more of them before your voyage is over."

"I guess that's one of the things that Johnson meant when he was talking to us last night," observed Joe. "He told us to come into the wireless room some time, and he'd show us what a busy place it is."

"No time like the present!" exclaimed Bob. "Let's go now."

CHAPTER XXII

STARTLING NEWS

THERE was a chorus of approval from all but Jimmy.

"Don't forget it's near supper time," he objected.

Joe threw up his hands in mock despair.

"That precious stomach of yours!" he groaned.

"Nothing can make Jimmy forget that," laughed Bob. "Nero fiddled when Rome was burning. Jimmy would eat if the *Meteor* were sinking."

"He'd rather die full than live empty," put in Herb.

"And Jimmy's been nibbling at doughnuts all the afternoon, at that," Joe said accusingly.

"I've had to keep up my strength," was Jimmy's defense of himself. "And, anyway, I've given Hector a good share of them. Haven't I, Hector?"

The dog gave a series of barks that Jimmy interpreted as being in the affirmative.

"He isn't to be relied on," declared Herb. "He'd back you up in anything."

"Anyway," Jimmy hinted darkly, "I haven't eaten all the doughnuts that I brought on deck. Somebody swiped two of them from my pocket. I'm not mentioning any names, but you fellows and Ensign Porter are the only ones that have been near me, and I'm dead sure that Mr. Porter didn't do it."

"That seems to put it up to us," observed Joe. "Jimmy, it goes to my heart to have you think so poorly of those you know so well."

"That's just it," said Jimmy. "I know them too well."

"If any of us has done it," said Herb—"mind, I say *if* any of us has done it—the only motive was to prevent your having an attack of acute indigestion. We think a lot of you, Jimmy."

"That's very beautiful," replied Jimmy. "So beautiful that it almost makes me cry. How did that crumb of doughnut come on your coat?"

Herb hastily brushed his coat and Jimmy laughed loudly.

"There wasn't any crumb there," he finally said. "But I know now who got my doughnuts. I see I'll have to put padlocks on my pockets."

The laugh was on Herb, and Jimmy good-

humoredly but persistently dwelt on the subject as he led the way to the supper table.

They still ate, as at the start of their voyage, with the petty officers of the ship. Captain Springer, who was very grateful to the boys for having once saved his life, had invited them to eat with him and the other chief officers at their mess. But the boys had felt that they would often be in the way when the officers were talking over official matters, and so, while thanking the captain warmly for his courtesy, they had asked to remain where they were.

They felt, too, more at their ease without frills or formalities to worry about, and they found themselves in the company of a genial, intelligent lot of men where laughter was free and jokes were plenty. And as far as the food was concerned, both in quantity and quality, they could ask for nothing better. Jimmy had pronounced it "bang up," and anything that received that epicure's approval left nothing else to be desired.

"Coming to see you to-night, Mr. Johnson," Bob announced to the chief wireless operator.

"Come right along," answered Johnson, heartily. "You'll be as welcome as the flowers in spring."

The Radio Boys took a short turn on deck

after supper, and then accepted the operator's invitation. When they trooped into the wireless room, they found Dr. Fisher, the medical officer of the ship, sitting beside the sending set of Marston, the assistant operator.

The doctor was a short, round, jolly man, with whom the boys had already made acquaintance. He was a great favorite with them. He was full of tales of the sea, which he had sailed for many years. But the genial manner and the quips and jokes with which he abounded did not obscure the fact that he was thoroughly educated and very skillful in his profession.

Johnson was also extremely busy when they went in, and so was Maxwell, who attended to the maps and charts. So the boys seated themselves quietly and listened to the conversation that was going on over the radio.

This, they soon found, was of absorbing interest. The doctor had been summoned to the wireless room by a call from a steamer two hundred miles away. It was a merchant vessel, and while it had an adequate supply of ordinary drugs on board, it had no medical officer.

A seaman on the vessel had developed an abscess that had formed in the tear duct of one of his eyes. He was suffering intensely, and it was feared that he might lose the sight of the eyes. The captain was at his wit's end as to how to

handle the case. Could the surgeon on the *Meteor* help him?

Dr. Fisher could and did. With Marston to send the message, the doctor rapidly and concisely gave directions about the application of the proper lotions and other treatment needed. He finished by directing the captain to call him up again in the morning and report on the progress of the case. Then, as he turned away from the instrument, he caught sight of the boys.

"Hello," he said, with a smile. "Didn't know you were listening in on my long distance clinic."

"It was mighty interesting," said Bob. "Do you have much of that kind of work to do?"

"Lots of it," replied the doctor. "As a matter of fact, I think I do more prescribing for people off the ship than I do on it. A Government ship these days is nothing more nor less than a traveling dispensary. Scarcely a day passes without some call of this kind."

"I should think it would be especially hard when you can't see your patient," remarked Joe.

"It is," the doctor admitted. "I can't feel their pulse, I can't note their temperature, I can't judge by their appearance, I can't do a dozen things a doctor likes to do when he's treating a case. I have to depend on descriptions, more or less intelligent. But with all those handicaps, an immense amount of service can be rendered

over the radio. A great many lives have been saved and a great deal of suffering relieved by means of wireless that wasn't possible before it was invented.

"Just a little while ago, I got a call from a ship, one of whose seamen was temporarily paralyzed through lack of proper circulation in the legs. Another man who had intestinal troubles I had put in ice packs. I prescribed medicines in addition, and a little later, when the vessels were on their return voyages, I received messages of thanks that told me both had been rapidly cured. Those are only a few scattered instances. I could mention dozens of the same kind. And what I've been able to do in that direction is being done in other instances by hundreds of ship's doctors every day.

"They tell me you boys are radio fans," he concluded, as he rose to leave the room. "Well, I congratulate you. Radio's the greatest thing in the world."

Marston, who had just taken down another message, turned to the group.

"Would one of you boys mind calling McDonald?" he said.

McDonald was the chief engineer of the ship, a dour, grizzled Scotchman, snappy and cranky, but one who knew his work and loved it. His engines were the apple of his eye, and while he

was at work he talked and crooned to them as though they were his children.

"I'll go," said Joe, springing to his feet.

"Lucky if you get back without having your head snapped off," laughed Bob.

In a short time, Joe returned, followed by the old engineer, puffing and grumbling.

"An' wha' is eet ye're callin' me up here for?" he demanded truculently.

"Listen, Mac," said Marston, placatingly. "Here's a captain of a ship that's operated by a Diesel engine and he's running out of Diesel oil."

"Mair fule he," growled McDonald. "Wha's that my beesness?"

"Well, you see," explained Marston, "he'll have to stop his voyage to re-fuel, and at the nearest port he can get only heavy oil. He's never used that kind before, and he wants to know what the effect will be on his engines. He——"

Here the choleric old engineer exploded, and the air was blue for a while as he stamped around and roared about the "fule cap'n" that ought to be sailing toy boats in a bathtub instead of commanding ships on the high seas. Marston let him rave until his wrath and scorn had subsided, and then returned to the attack.

"Oh, come along, Mac, and be a good fellow,"

he urged. "The man's in a fix, and he needs advice. No doubt he's a fool and all that, but you can't expect him to know all that you do about engines. Who does, for that matter? There's only one McDonald," he concluded, with a side wink at the boys.

That the "salve," though rather crudely laid on, was not without effect was shown by the final consent of the old fellow to give the necessary information, though only on condition that Marston should give it in his exact words. As these, however, involved a number of uncomplimentary references to the "blitherin' fule" that needed to ask such questions, it is needless to say that Marston toned it down to the proper extent, and finally with a last blast against "tin sailors," McDonald clumped out of the room and down again to his beloved engines.

"This seems to be a regular clearing house for information of one kind or another," commented Bob, after they had had a good laugh at McDonald's expense.

"That's what it is," agreed Johnson, looking up from his instrument. "You'd be astonished and often amused at the multitude of all kinds of questions that are hurled at us. Most of them are sensible, and we are able to be of real service. But the loneliness of the sea is a thing

of the past—that is, to all vessels equipped with wireless, and most of them are nowadays."

"You said that this was a busy place, and now we know it is," remarked Joe.

"Yes. And yet you have heard to-night only the side issues, as it were," was the reply. "We have to be on duty here every minute of the twenty-four hours of the day, working, of course, in different shifts. Our first duty is to comb the seas that are likely to be strewn with icebergs, steaming along on a zigzag, a rectangular or triangular course, as conditions may require. The moment a berg is discovered, we have to find out all about it, measure it, chart it, photograph it, and send out warnings as to its exact position."

"That alone would seem to be enough to take up all your time," said Jimmy.

"It takes a good deal of it," returned Johnson. "When the night is dark and stormy, we have to keep the searchlight playing on the berg all night, so that it won't be lost sight of. When a vessel enters the dangerous area, we have to keep her successive positions plotted on the map, so that we'll always know where she is until she passes again out of the zone. Once a day, we have to send in the day's report to the Hydrographic Office in Washington. Then, twice a day, we're

required to send in a meteorological report to the Weather Bureau. Oh, take it from me, we don't have a chance to get rusty on this job."

The weather remained fine, and several days passed busily and fruitfully, the Radio Boys becoming more and more familiar with the fascinating work of the iceberg patrol. Their keen interest in radio cemented the friendship between them and the operators, who gladly showed them all they knew. So expert did the boys become, and so frequent were the opportunities afforded them, that before long any one of them, but especially Bob and Joe, could, on a pinch, have taken the places of the regular operators.

They would have been perfectly happy had it not been for the shadow of dread that hovered over them concerning the fire in Clintonia. They had not yet succeeded in getting news any more definite than that contained in the first meager dispatches, and their apprehension seemed at times more than they could bear. To banish it as far as possible, they sought to engross themselves in the work of the ship. But many a night they tossed restlessly on their pillows, a prey to torturing thoughts and fears.

Blended with their more personal fears was anxiety about Mr. Strong. It was possible that he might have been picked up and the fact not

generally broadcasted. But, as far as they knew, he might have found a grave in the Atlantic.

One morning, after the boys had been conscious at intervals through the night of much coming and going on the *Meteor,* they were surprised to note that Johnson and Marston were missing at the breakfast table. There were many other vacant seats also, and the boys looked at the steward in wonderment.

"What's the big idea?" asked Bob, indicating with a sweep of the hand the empty places.

"Sickness," replied the steward. "Heap of trouble on board. Captain Springer told me to ask you to come to his cabin as soon as you had finished breakfast."

CHAPTER XXIII

IN DEADLY PERIL

THE Radio Boys looked at each other in anxious surmise.

"Seems to be something serious," remarked Bob.

"That explains the tramping I heard last night," said Joe. "I remember being waked up two or three times. Once I was tempted to get up to see what the matter was, but I dropped off again before I did it."

The anxiety they were under made them hurry through their meal more quickly than usual, and they were soon at the door of the captain's cabin.

The commander looked up with a troubled face, as, following their knock and his bidding them come in, they entered the room.

"I'm in something of a dilemma," he began, without any preliminaries, when they had seated themselves. "A sudden sickness has come upon many members of the crew and the petty officers. The doctor diagnoses it as ptomaine poisoning, due to some defective canned goods that

the steward served yesterday. I see, however, that you haven't been affected, judging from appearances."

"I feel fine," replied Bob.

"If I felt any better I'd be afraid of myself," said Joe.

Jimmy and Herb confirmed their comrades, and a look of relief came into the captain's face.

"That's a bit of luck," he said, "for the ship's especially in need of just the kind of service you boys are best qualified to render."

"You mean in the wireless room?" asked Bob, eagerly.

"Just that," replied the captain. "While others in the ship are ill, there are plenty of men to take their places. But the radio room is the heart of the ship, and it's just there that the blow has hit us hardest. Johnson and Marston have been taken pretty badly, and while there's no danger of any fatal ending, Dr. Fisher says it will be several days before either of them will be fit for duty. There are some other men in the crew that have a smattering of radio knowledge, but none of them measures up to you young fellows in that particular."

"You can count on us, Captain!" exclaimed Bob, earnestly.

"We'll be there with both feet," declared Joe, more emphatically than elegantly.

"We'll work day and night," promised Jimmy, his round face beaming.

"And we'll stay on the job till the cows come home," added Herb, with an energy surprising in him.

The captain smiled his gratification.

"I had no doubt of your good will," he said. "And equally I have no doubt of your ability. I have just come from a talk with Johnson, and he says that for some days past you have been practising the sending and receiving and have become thoroughly familiar with the ship's routine. Of course, in case of any great or unexpected emergency, you can consult him or Marston. Maxwell, the third man, is not very seriously affected, and he'll be with you part of the time and attend to the maps and the making out of the daily reports. But the actual work of running the wireless end of it will be up to you, and I'm satisfied it will be in good hands. You can arrange your shifts to suit yourselves, as long as one of you is constantly at the key."

"We're glad you trust us so fully," said Bob, as spokesman for all of them, "and you can depend on us to put all our thought and strength into the work."

"Fine!" declared the captain. "You can start at once. Maxwell is in there now, and you can

take the work over from him, and leave him free to attend to his maps and charts."

The Radio Boys left the captain's cabin with a deep sense of responsibility, and yet with a keen feeling of elation. Here was a chance to win their spurs, to show what they could do, to justify the captain's faith in them, and all of them were determined that he should not be disappointed.

They arranged their shifts, and, as it was desirable that two of them should always be on hand, they planned to work in two couples. Bob and Joe, as the oldest and the most experienced in radio work, were the captains of the shifts. Bob was to work with Jimmy, and Joe with Herb, with Maxwell on hand a good deal of the time to fill in as extra man, in case of emergency.

The first day was naturally the most trying one. Each felt a certain amount of nervousness at the start that interfered with his doing his best work. But this wore off as all gained confidence in themselves and familiarity with the instruments, and by the third day, they were managing the wireless room almost like veterans.

On the third day, a large fleet of icebergs was sighted, and the boys were kept on the jump in reporting their position to vessels in the steamer lanes. They had to keep a vigilant eye and re-

sponsive ear also on the iceberg alarm, which again and again warned them of the dangerous proximity of bergs.

In the afternoon their work was more than doubled, for a gray, heavy fog settled down over the sea. It grew denser as the hours went by, until the ship's bow could not be seen from the stern.

A feeling of intense anxiety pervaded the ship. All of the officers wore grave faces, as they paced the decks and gazed out into the dank fog that had a grisly resemblance to a winding sheet. All the crew had been summoned to duty, even the shift below having had to tumble from their berths.

The powerful searchlights had been turned on, and swept the sea in all directions. But even their dazzling brilliance could not carry far in a fog like that. Occasionally, through a momentary rift, the great spectral shape of a berg could be seen drifting by.

The engines had been slowed down, and the *Meteor*, with barely enough motion for steerageway, crept along like a blind man, groping for the right path. She was in danger, and every soul on board knew it. Even Hector, with that strange instinct given to animals, felt that some peril impended, and sat in a corner of the wireless room, whimpering.

It was the shift of Bob and Jimmy, but Joe and Herb were with them, as they felt too uneasy to go to their berths, and wanted to be on hand in case of emergency.

The faces of the Radio Boys were tense with anxiety, as they noted the signals given by the iceberg alarm. For now it was giving warnings from all sides. Had the echoes come from one direction, the problem would have been simple, as the *Meteor* could have sheered off on an opposite course. But how to sheer off, when there was equal danger in front and astern, on the port and starboard sides?

The moment came when there was no use blinking the fact. Despite the most clever seamanship, the most adroit dodging and shifting, the most instant compliance with the reports from the wireless room, the gallant ship was in the very midst of the iceberg fleet. The giant hand of the ice king was closing upon her.

Then, suddenly, there came a tremendous crash, and the ship shivered from stem to stern.

CHAPTER XXIV

TRAPPED

Loud orders sounded on the deck and there was a rush of many feet as the men sprang to obey. But with all the din, there was no panic or confusion. It was a Government ship, manned by a trained and disciplined crew, and in this moment of peril they lived up to the best traditions of the navy.

The Radio Boys looked at each other. Their hearts were thumping fast with excitement, but they rose to the emergency and held their voices steady.

"Must have hit a berg," said Bob, never, however, letting his thoughts wander from the key.

"Sounds that way," replied Jimmy. "But we were barely moving, and perhaps it didn't do much damage."

Just then there was a loud explosion, and a moment later the *Meteor* rolled from side to side while there was a deafening clatter on deck.

"Part of the berg must have broken off, and

some of the flying fragments have struck the ship," conjectured Joe.

The *Meteor's* engines now began to reverse, and the boys could feel the boat yield to them.

"Backing off!" said Herb. "Thank goodness she didn't stick."

At this moment, Ensign Porter appeared at the door.

"Captain's orders," he announced. "Send out S. O. S. at once. Ship surrounded by bergs."

"Is the ship badly hurt?" ventured Joe, as Bob sprang to his key.

"Don't know yet," returned the ensign. "This is a precautionary measure. An examination is being made of the hull. We know that some of the plates are cracked, for water is coming in."

"Anybody hurt when the top of the berg broke off?" questioned Herb.

"Two men hit by flying chunks," was the answer. "One had his arm broken. Doctor attending to them. Lucky the whole mass didn't hit the ship. Would have crushed it like an eggshell."

He hurried off. Bob, in the meantime, had been flinging out the S. O. S. messages through the ether, describing the plight of the ship and giving her exact position.

Again and again he sent the messages abroad, but for some time received no answer. Then

messages began to come at intervals, but none of them from ships near by. It would take many hours for help to come from these, though the promise was made that they would make the fastest time possible.

"Perhaps we'll have to take to the boats," conjectured Jimmy.

"That's a possibility," admitted Joe.

"I'm not hankering for any more experiences in an open boat," put in Herb. "The one I had was enough for a lifetime. I'm no glutton."

"We might be afloat for days with no one knowing where to look for us," said Jimmy, somberly.

"I guess not," observed Joe. "We could keep the radio going, and there are a good many ships in these waters. As long as a storm didn't come up we'd probably be rescued."

"But a storm might come up," persisted Jimmy. "We've had so much good weather lately that a storm must be just about due. And what did you mean by saying that we could keep the radio going?"

"Didn't you know that the lifeboats of the *Meteor* were equipped with radio sets?" asked Joe.

"I hadn't heard of it," replied Jimmy.

"Sure thing," replied his comrade. "The boats are covered now with tarpaulins, and that's

the reason you haven't noticed them. Johnson lifted the cover of one that we were passing the other day and showed me the set. Of course they're not so powerful as the regular ship's set, but they could send a good way and get in touch with vessels all about us. But I hope there won't be any necessity for that. I'm going out now and see what I can learn of the condition of the ship. Come along, Jimmy. Herb can stay in here with Bob, and we'll be back in a few minutes."

The pair went out, with Hector trailing lugubriously at their heels.

The fog was still as dense as ever and spread like a pall over the ship. On the starboard side a great mass reared itself that they knew must be an iceberg. It was so close that it almost seemed as though they could reach out and touch it.

Why the *Meteor* did not get away from such a deadly menace became apparent when they went over to the port side. There, looming up in the gray gloom, was another berg, seemingly even more massive than the one they had first seen. Escape was cut off in that direction.

They made their way to the bow and the stern, in the hope of discovering some way out of the impasse. But here again nothing hopeful presented itself to their straining eyes. The icebergs did not seem so near as on the sides, but

by the aid of the fierce rays of the searchlight they could make out huge floating masses that blocked the way.

The *Meteor* was trapped!

As this conviction penetrated the minds of the two boys, their hearts sank for a moment. They were under no delusions as to the dreadful danger they were in. They had already seen too much of the possibilities of icebergs to underestimate their deadly peril.

Their lives and the lives of all on board were simply hanging by a thread. At any instant the summit of one of those bergs might break off and smash the ship into splinters. Or, if this did not happen, the shifting currents might bring the two bergs at the sides together, catching the *Meteor* between them, grinding her to bits.

Just then Ensign Porter passed them.

"Any water in the hold?" asked Joe.

"No more than we can handle," replied the ensign, without relaxing his pace.

"That's some comfort, anyway," commented Joe.

The two boys made their way again to the port side of the vessel. Their progress was made difficult by the splinters of ice that strewed the deck and made it slippery.

"What are those things over there on the berg?"

asked Jimmy. "There, on that level space? They seem to be moving."

Joe strained his eyes in the direction indicated.

"It does look that way," he said. "Maybe they're some of the *Meteor's* men who have been sent there for something."

"They don't look like men," remarked Jimmy, in a puzzled way. "They——"

What more he might have said was lost in a crashing, grinding roar as the berg rubbed up against the side of the ship. A shower of ice splinters dislodged by the contact came down on the deck like giant hail.

At the same time something else came down! Two great lumbering figures had either been thrown or had leaped from one of the overhanging ledges of the berg!

The boys took one look at them, and their faces turned ashen.

"Bears!" shouted Joe. "Polar bears! Run, Jimmy, run!"

The boys turned and ran for their lives.

CHAPTER XXV

IN THE NICK OF TIME

Joe and Jimmy made for the wireless room, while behind them came the larger of the two polar bears, the other apparently having been injured in the fall.

The boys were running at full speed, but the deck was slippery with ice, and again and again they almost lost their footing. It seemed to them as if they were in a nightmare.

Behind them, they could hear the heavy padding of the brute's feet, running with surprising speed for so heavy and clumsy a creature. Once Joe ventured to glance behind him, and the sight of the huge monster with his slavering jaws and fiery eyes bearing down upon them lent wings to his feet.

They heard startled shouts behind them, and knew that others had noted the sudden invasion of the ship by the terrors of the North. But any help that might come from that quarter would be too late to do them any good. Their

fate would be decided in a few seconds more. A death more terrible than that threatened by the iceberg itself was close at their heels. They must depend upon their own fleetness for safety.

Before them loomed the open door of the wireless room. If they could once get within its friendly shelter and slide to the heavy door, they would be safe.

But the bear was gaining fast. The sound of that horrid padding grew more distinct. The boys could hear the growls of the pursuer, all his savage instincts aroused in the fury of the chase. A moment more, and his hot breath would be on their necks, his massive paw upraised to slay.

They were running now as they had never run before, their breath coming in quick gasps, their lungs strained almost to bursting.

They were within twenty feet of the door and safety when Jimmy slipped on a piece of ice and fell headlong.

Joe checked himself and rushed to Jimmy's side to help him to his feet. But before he could get him up, the bear had reached them and reared himself on his hind legs to seize them.

Hector had been running along with them, taking good care to keep out of the bear's reach, and barking furiously. He was devotedly attached to Jimmy, and when he saw his master

down, his affection and loyalty dominated his natural fear. As the bear upreared itself, Hector rushed in from behind and savagely bit one of his hind legs.

The polar bear, startled by this sudden onslaught, roared furiously and turned to face this new enemy. And in that moment of respite, Jimmy, with Joe's help, regained his feet and together they raced into the wireless room, with Hector close after them.

Bob and Herb, who had been drawn to the door by the dog's barking, slid the heavy door shut. And they were just in time, for the next moment the bear hurled himself against it with demoniac fury.

But the stout door held, and the baffled brute, balked of his prey, lumbered around the cabin, seeking some other entrance and emitting roars of rage and disappointment.

Joe and Jimmy, gasping, but with infinite relief in their hearts, knowing that they were safe, sank down on the floor of the radio room and tried to regain their breath. Bob and Herb hovered around, shaken to the depths by the narrow escape of their comrades.

"I'm—all—in!" panted Jimmy, as soon as he could speak.

"And no wonder, old boy," said Bob, sym-

pathetically. "You've never been so near death as you were at that moment."

"It was Hector that saved my life," said Jimmy, as he caressed the head of the dog, who barked proudly as though he understood.

A volley of shots rang out from the deck, followed by the fall of a heavy object.

"I guess they've got the bear," said Bob.

"Who so nearly got me," Jimmy finished.

Bob slid the door open a couple of inches and looked around. What he saw prompted him to open it to its full extent.

"Come out and take a look at them, fellows," he called. "The *Meteor's* men have bagged them both."

They joined the group that stood around the monsters, now forever beyond the power of inflicting injury. They were formidable beasts, and even in death retained their looks of sullen ferocity.

"Must have been brought down on a berg from the Arctic," surmised Lieutenant Mayhew, who had directed the party that had slain the monsters. "It happens that way sometimes. These are as big as any I have ever seen. I suppose it was as much of a surprise to them as it was to us, when they found themselves aboard the ship."

"I'd like to have one of the skins as a memento," ventured Jimmy.

"Same here," echoed Joe.

"I guess that can be arranged," replied the lieutenant. "You can speak to the captain about it, when he has time to think of anything but the ship."

That time did not come for many hours thereafter, for the captain still had his hands full in looking after the safety of his vessel. She was still in most imminent peril. Any hour, any moment, might be her last.

The Radio Boys, dismissing from their thoughts for a time the encounter with the bear, worked steadily at the key, relieving each other from time to time, sending and receiving messages and urging hurry on the several vessels within their range that were coming to their assistance.

And all through those tense hours, every one was conscious that at any moment the two giant icebergs at the side, coming together, might clip the vessel into shreds as with a pair of shears.

The first ray of hope came when the fog began to lift. While this revealed more clearly their dreadful peril, it also showed them a channel by which they might back out and reach the open sea.

With infinite caution, the engines began to re-

verse. But the *Meteor* had barely begun to respond when a shout arose.

"The berg is toppling!"

All eyes were turned aloft. The top of the berg on the starboard side was swaying. The hearts of the spectators almost stood still as they watched.

In what direction would it fall?

If it fell toward them, the cruise of the *Meteor* ended then and there and everybody on board was doomed to a watery grave.

As though to torture them with suspense, the peak kept rocking like a pendulum. Then with a stupendous roar, it broke off and plunged into the sea on the further side.

There was quick and seamanlike work for the next few minutes, and then a great cheer arose as the noble vessel threaded its way through the threatening bergs and reached the open sea. The ice had been robbed of its prey!

Late that evening, Captain Springer, his face cleared of all anxiety and alight with its usual genial smile, paused at the door of the wireless room where the boys were rejoicing over their deliverance.

"I can never thank you boys enough for the manful way you helped us in this crisis," he said. "Your work has been beyond all praise."

"We only did our duty," said Bob, modestly,

"but it's mighty good to have you feel that way. I've sent out those messages you directed, telling the vessels that were coming to help us that we're all right."

"Good!" commended the captain. "Now you can send another to the Hydrographic Office, asking them to send out another steamer in our place, as we are compelled to make for Halifax for repairs."

"Does that mean that we are going directly home?" asked Joe, eagerly.

"As fast as the ship can carry us," replied the captain. "We can make port all right under our own power, but the vessel has been so damaged by the ice that it needs thorough repairs and overhauling."

He left them, and there was a perfect hubbub of delight among the Radio Boys. Now they would be able to get in touch with their parents, and receive the answers to the questions that had been burdening their hearts so long.

They had to travel at reduced speed, owing to the *Meteor's* damaged condition, and it was the third day afterward that they reached Halifax.

The first thing the Radio Boys did after they had set foot on shore was to rush to the telegraph office. They sent long messages home, announcing their safe return to port and asking for all particulars of the fire.

The boys were on tenterhooks while they waited for the answers, which they longed for so eagerly, and yet which, in a sense, they dreaded for what they might contain.

What a weight was lifted from their hearts when the answers came! They were full of love and urgent with entreaties for them to hurry home. As regarded the fire, it had been a severe one, but had not materially affected the families of the Radio Boys. The Laytons and the Fenningtons had escaped unscathed. Dr. Atwood's garage had been burned, and part of the Plummer home had been damaged. But nobody had been hurt, and as the property losses were fully covered by insurance, there was nothing to lessen the joy of the boys in their homecoming. And that joy was deepened by a statement in Mr. Layton's message that Mr. Strong had been rescued, though his boat was picked up many hours later than any of the others. He had suffered no serious injury. Nor had Bob's watch, which Mr. Layton took especial pains to mention, as he knew how highly his son prized it, been hurt.

The boys danced about the telegraph office and fairly hugged each other in the exuberance of their relief and delight, while the operator, who knew the reason, smiled in sympathy.

"Glory hallelujah!" shouted Bob.

"They're safe!" exulted Joe, while Jimmy and Herb were incoherent in their raptures.

When they had gotten themselves under control, they set to work on their packing. They had to attend to the expressing of the polar bear skins, which the captain had given them, one to be retained by Joe and the other by Jimmy, as souvenirs of their narrow escape. And Jimmy took a good deal of time and care in arranging for Hector to be taken along in the baggage car, with an ample provision of food for the journey.

It was a hilarious group of Radio Boys that finally took the train for home, after cordial partings from Captain Springer, his lieutenants, Ensign Porter, Johnson, Marston, Maxwell and their other friends among the crew of the *Meteor.*

"And now for home again!" exulted Jimmy.

"And God's country!" added Herb.

"And with whole skins," laughed Joe.

"After the most exciting time of our lives," summed up Bob. "We'll never forget those weeks on the Iceberg Patrol!"

THE END

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